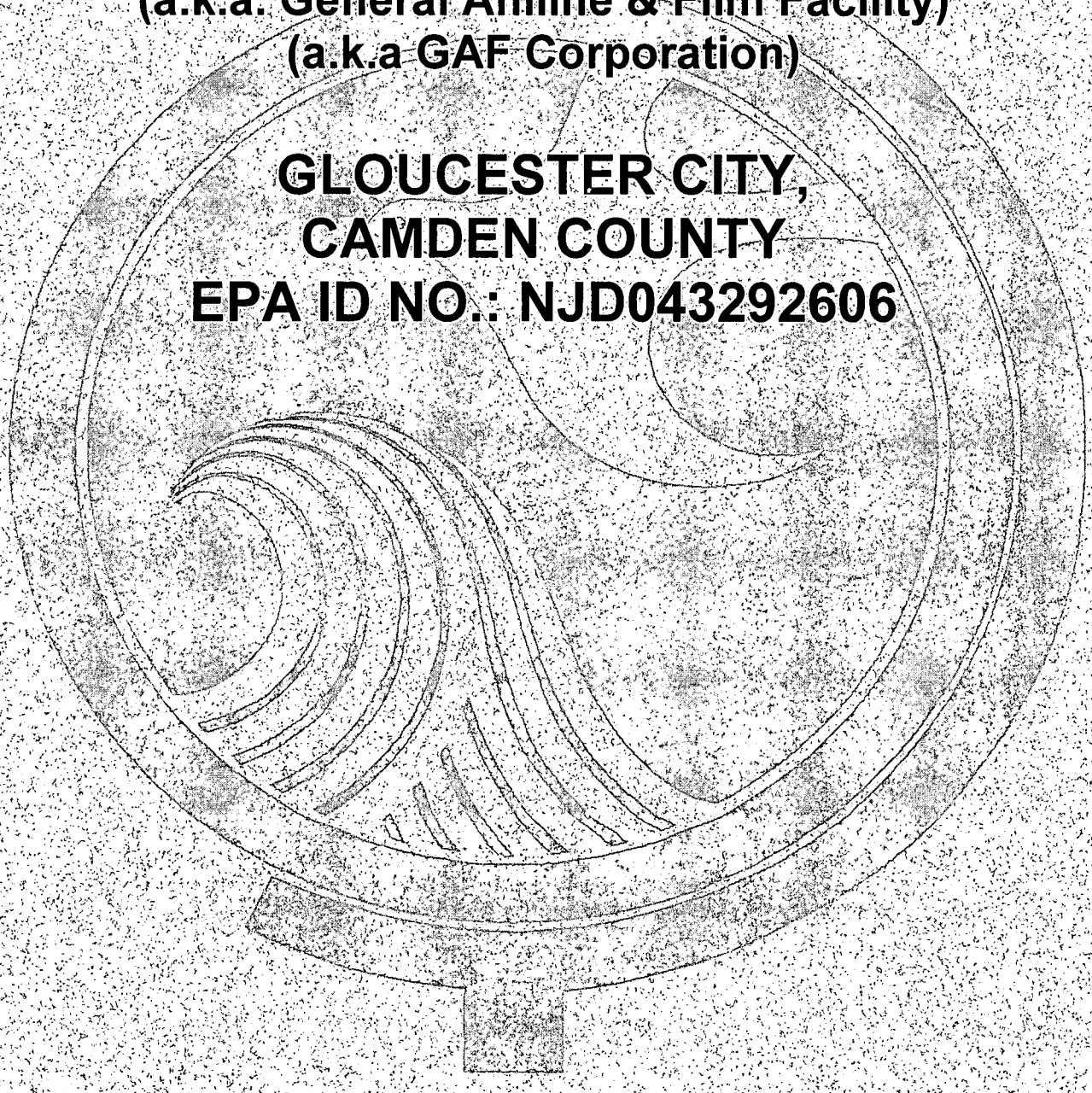
SITE REASSESSMENT

GAF Building Products
(a.k.a. General Aniline & Film Facility)
(a.k.a GAF Corporation)

GLOUCESTER CITY,
CAMDEN COUNTY
EPA ID NO.: NJD043292606



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL MEASUREMENTS AND SITE ASSESSMENT

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GAF BUILDING PRODUCTS
A.K.A.GENERAL ANILINE & FILM (GAF) FACILITY
A.K.A. GAF CORPORATION
651 WATER STREET
CAMDEN COUNTY, NEW JERSEY
EPA ID No. NJD043292606

TABLE OF CONTENTS

NARRATIVE

SITE REASSESSMENT REPORT
GAF Building Products
a.k.a.General Aniline & Film (GAF) Facility
a.k.a. GAF Corporation
651 Water Street
Gloucester City, Camden County, New Jersey
Latitude: 39° 53'26" N Longitude: 75° 07'44"W
EPA ID No. NJD043292606

INTRODUCTION

The United States Environmental Protection Agency (EPA) has tasked the New Jersey Department of Environmental Protection (NJDEP) with a Site Reassessment to gather and evaluate new information on the General Aniline & Film (GAF) Facility site located in Gloucester City, Camden County. The purpose of the Site Reassessment is to determine whether further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is needed.

GAF received No Further Action (NFA) letters from the New Jersey Department of Environmental Protection (NJDEP) in 1992 and 1995 in response to an ECRA investigation and remediation triggered by sale and transfer of a portion of the property to Vanguard Vinyl Siding. Post-excavation samples from most of the Areas of Concern (AOCs) revealed no contamination, or contamination below New Jersey Soil Cleanup Criteria. A Declaration of Environmental Restriction was generated in 1995 for levels of PCB and asbestos contamination allowed to remain undisturbed with an asphalt cap and a soil cap in place, respectively. An investigation concluded that groundwater had not been impacted by site operations, so no groundwater monitoring requirements were imposed. (Attachments A, B, and C)

SITE LOCATION

General Aniline and Film (GAF) Corporation encompassed approximately 36 acres at the intersection of Charles Street and Water Street in Gloucester City, Camden County, New Jersey. In 1992, when the New Jersey Department of Protection (NJDEP), Bureau of Field Operations conducted a Site Investigation, the site included Block 110, Lot 2A (which, according to the Gloucester City tax office, includes lots 3, 3A, 4, 15, 17, and 20); Block 111, Lot 1; Block 116A, Lots 14A, 16, 17, 19 through 24, 14F, 15, 61 through 67 and 25 through 28; and Block 120A, Lot 3. GAF owned Block 110, Lot 3B until August 1981, when it sold this property to Vanguard Vinyl Siding, Inc. Ownership of additional lots has been transferred since then, and currently all lots are included within a NJDEP Brownfields Development Area (BDA), named the Southport Redevelopment Area, and is currently zoned as BI (Business Industrial). The former site is unoccupied and inactive, and no operations have been performed at the site since 1983. The proposed use of the Southport Redevelopment area is residential. (Attachments A, B)

Historically, the property was bordered to the south by the Amspec Corporation, to the west by the Delaware River, and to the North by the Vanguard Vinyl Siding, Inc. Currently the property has been incorporated into the pending BDA, and clear bounding properties cannot be defined. (Maps 1, 2, 3, 10)

SITE HISTORY

Portions of the subject property were used as a horse racing facility known as the South Jersey Jockey Club Grounds between the late 1800s and early 1900s. In the early 1900s to approximately the 1930s, portions of the site were used by NJ Shipbuilding of the Pusey & Jones Company. In 1918, a paper mill known as the Lang Company began utilizing the site. The Ruberoid Company took over the Lang Company operations in the 1930s, and in 1967, GAF took over operations of the Ruberiod Company. GAF ceased operations at the site in approximately 1983. One large warehouse, known as the Charles Street Warehouse, is still utilized for the storage of files and records, but no industrial operations occur at this location. Currently the property is included as part of a planned BDA through the NJDEP, with the area planned for construction of residential properties. (Attachments C, D)

Manufacturing operations conducted at the facility included the use of paper, wood chips, and sawdust to make felt paper for roofing, flooring, and vinyl siding. The felt paper was manufactured, then shipped off site for saturation and binding to make various products. In addition, GAF produced asbestos pipe coverings from the 1950s until the late 1960s. Approximately 12 to 15 percent of the asbestos produced was discarded as solid waste. (Attachments C, D)

As part of the manufacturing process, water was withdrawn from the Delaware River, processed through the lower plant and supplied as makeup to the processing operations. The manufacturing plant contained a closed process water system that prevented any wastewater discharges. The make up water required was the same as the portion of water lost to evaporation during the drying process (approximately 92,000 gallons per day). Tannins generated as a result of the steam cooking process required neutralization; liquid sodium hydroxide was an additive to the overall water treatment process to maintain a near neutral pH. Typical water treating chemicals were used to control hardness. In addition, a polymeric material of the polyamide family was utilized in the process to help coagulate fines and properly introduce them to the finished products during the felt forming stage. (Attachment A)

Additional waste from the plant consisted predominantly of cellophane, plastics, aluminum, cans, glass and bark. A portion of the site (Area C – further define later) was used as a fill area to dispose of metal, glass, plastic, and other impurities removed from the process stream during the initial steps of the felt manufacturing process. Additionally, other plant debris including scrap finished products which contained bound asbestos, was periodically disposed in the fill area. (Attachment A)

Two areas of the site were used by contractors from approximately May 1988 until March 1990, during the construction of the Gloucester City Sewage Pump Station by the Camden County

Municipal Utilities Authority. Lisbon Contractors, Inc. of Danboro, Pennsylvania stored equipment and materials on a portion of GAF's property at the corner of 6th and Water Streets. (Attachments C, D)

Carbro Construction Corporation of Bridgewater, New Jersey used a portion of the GAF property, on the corner of Charles and Water Streets, as a field construction office. Carbro Construction was involved in the installation of underground sewer pipes for the Gloucester City Sewage Pump Station. (Attachment A, D).

Keating Environmental Management, Inc. (Keating) performed a thorough Preliminary Assessment report for the site in October 2007 in anticipation of the Brownfields Development. Historical aerial photographs, topographic maps, and Sanborn. fire insurance maps were reviewed, and a thorough review of both past and present areas of concern was conducted. Past areas of concern included piping, french drain systems, underground storage tanks, various areas where soil was contaminated with PCBs from transformers, and asbestos-contaminated fill areas. Despite the Business-Industrial zoning, these areas had been remediated to NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC), and NFA letters were issued by NJDEP in July 1992 and May 1995 for the work. One area, an area of asbestos-containing fill, was remediated by placing a 2-foot soil cap above the contaminated soil. The area received a Declaration of Environmental Restriction (DER) on August 1, 1995, allowing the contamination to remain, but directing this area to remain undisturbed and undeveloped. These AOCs and their remediation are fully described in Attachment C, which is an excerpt from Keating's PA report.

Because the former GAF property will be zoned and utilized as residential property under the BDA, Keating re-evaluated these past AOCs in October 2007 as part of their PA, and investigated additional areas that may need remediation in order to comply to current residential NJDEP Soil Remediation Standards (SRS). These recommendations for past and present AOCs can also be found in Attachment C, from Keating's PA report. Remediation for the entire BDA will be completed with K&S Partners of Philadelphia PA, with direct oversight provided by and strict compliance to the residential NJDEP SRS ensured by NJDEP, Office of Brownfields Reuse (OBR).

CURRENT HAZARD ASSESSMENT

While several areas of potential concern exist, they have not yet been evaluated. Additionally, they will be addressed and remediated to residential standards as part of a larger BDA known as the Southport Redevelopment, with direct oversight provided by the NJDEP, Office of Brownfields Reuse. (Attachment C)

SOURCES

Numerous sources or areas of concern with on-site releases of multiple contaminants were identified at GAF and are described in detail in the Site History section, and the Keating PA attachment. (Attachment C)

Ground Water Migration Pathway

The GAF site is located in the Atlantic coastal Plain Physiographic Region. Underlying this area are unconsolidated sediments of Quaternary, Tertiary and Cretaceous age, consisting of alternating layers of sands, silts, and clays. The sediments are approximately 250 feet thick at the facility site and thicken eastward toward the Atlantic Ocean. The underlying bedrock material is Cambrian to Pre-Cambrian in age and is called the Wissahickon Schist. In Camden County, the Potomac-Raritan-Magothy aquifer system is the most productive source of groundwater. This system consists of aquifers composed of sand and some gravel and confining units composed of silts and clays, and is overlain in the outcrop area by highly permeable Pleistocene sand and gravel. The sands are divided into three hydrologic units: an upper, middle, and lower aquifer. The Magothy Formation comprises the upper unit; the middle and lower units are composed of sands of the Raritan Formation and the Potomac Group. (Attachment A)

The Magothy and Raritan Formations consist of alternating beds of sand, gravel and clay. The Raritan Formation is predominantly light-colored; the Magothy beds include some darker lignitic and glauconitic material. The maximum thickness of the formations in the Camden area is approximately 240 feet. In the vicinity of the GAF facility, two water-bearing zones have been identified in the Magothy and Raritan Formations. The zones are separated hydraulically by clay beds. Local and regional groundwater flow within the aquifer of concern is northwest toward the Delaware River. (Attachment A)

It was determined that groundwater has not been impacted by site operations, so groundwater has not been evaluated for the site. Based on this information, a release to groundwater has not been established.

Targets Associated with the Ground Water Migration Pathway

There are 39 public supply wells within a four-mile radius of the site. These 39 wells service a total population of 95,947 people. The closest well is Well 43, which is located 0.81 miles to the southwest, and is operated by Gloucester City Water Department. (Map 5, Attachment E)

A portion of the GAF site lies within a State-designated Well Head Protection Area. (Map 8)

Surface Water Pathway

GAF is located adjacent to the Delaware River to the west; runoff from the site would flow into the Delaware River, which flows south from the site. The Delaware River from river mile 108.4, to below the mouth of Big Timber Creek is classified as Zone 3. Designated uses in Zone 3 include agricultural, industrial, and public water supply after reasonable treatment; wildlife; maintenance of resident fish and other aquatic biota; migration of anadromous fish; secondary contact recreation; and navigation.

GAF terminated a long-standing New Jersey Pollutant Discharge Elimination System/Discharge to Surface Water (NJPDES/DSW) permit (Permit No. NJ0005371). The permit was valid for discharge of non-contact cooling water to the Delaware River, due to expire on April 30, 1990. On October 6, 1986, GAF filed an affidavit of exemption to terminate the above permit, due to closure of the facility. GAF ceased operating at the site in December 1983, so no releases to surface water are suspected since that time.

(Attachment A, C, D)

Targets Associated with the Surface Water Migration Pathway

Operations ceased in 1983, and all areas of concern identified at the time were cleaned up to below NJDEP standards and received an NFA. Since no contamination exists in the surficial soil, a surface water pathway does not exist. No groundwater issues were identified at the time, and therefore a groundwater to surface water pathway does not exist. Any areas of concern identified recently will be addressed during remediation of the BDA, under direct oversight of the NJDEP, Office of Brownfields Reuse. (Attachments A, C, D)

Soil Exposure Pathway

Contaminated soil was excavated and post-excavation samples collected documented that all contaminants were below NJSCC in all but two areas. A Declaration of Environmental Restriction (DER) was filed on August 1, 1995 for the asphalt cap over remaining PCB contamination, and a two-foot soil cap over remaining asbestos contamination. As per the DER, contamination was allowed to remain, with strict guidelines that the area was not to be developed, and any future development plan would allow these areas to remain as open space or paved parking lots so that the underlying contaminated soil would not be disturbed.

(Attachments B, C)

Targets Associated with the Soil Exposure Pathway

The site is located in an area that is currently non-residential. There are no onsite workers because the facility has not been operating at the site since December 1983. There are 73 people residing within 0.25 miles of the facility. Since no post-excavation contamination

was detected at the site within the first 2 feet of soil below ground surface, a soil exposure pathway is not present. (Map 6)

Air Migration Pathway

The facility currently maintains no air permits as operations at the facility ceased in December 1983. A release to the air migration pathway was neither suspected nor observed. (Attachment D)

Targets Associated with the Air Migration Pathway

There are 73 people living within 0.25 mile of the facility and 148,793 people residing within 4 miles of the facility. There are 5 acres of wetlands within ¼ mile of the facility. A total of 1,665 acres of wetlands are within 4 miles of the facility. (Maps 6, 7)

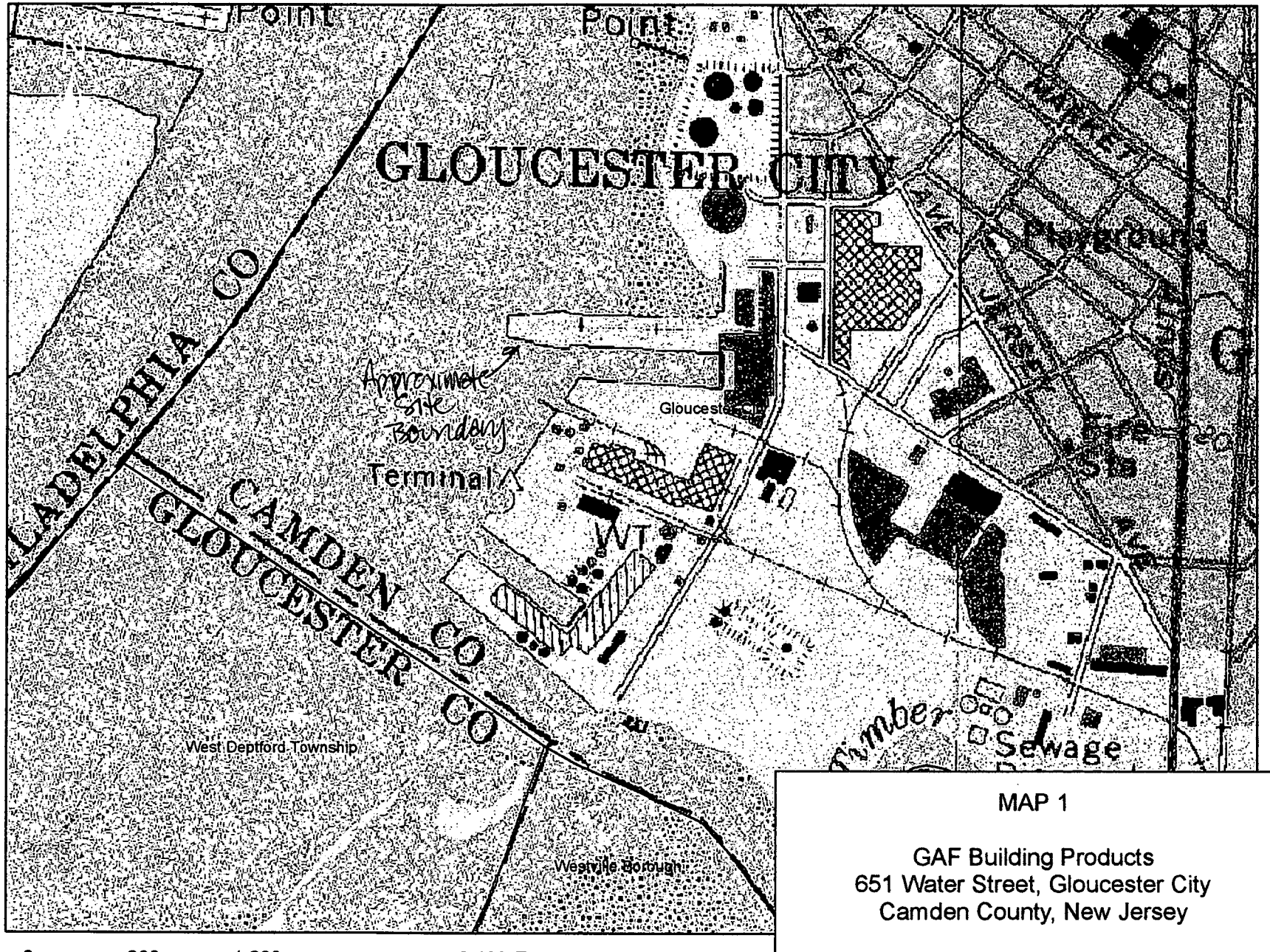
CONCLUSIONS

On-site soil contamination has been documented and attributable to the site as a result of past operations and waste handling practices. Remedial efforts have reduced the levels of contaminants in soil below NJDEP cleanup levels. The site has been included in the Southport Redevelopment Area, which is a Brownfields Development Area and will be developed primarily for residential use. Any remaining areas of concern identified will be evaluated and remediated to below current residential soil remediation standards under direct oversight provided by NJDEP, Office of Brownfields Reuse.

Based on these results and an overall HRS Quickscore of <28.5, the site warrants a No Further Remedial Action Planned designation under CERCLA.

Submitted by: Jill R. Dunphy, Geologist
Bureau of Environmental Measurements and Site Assessment
September 12, 2008

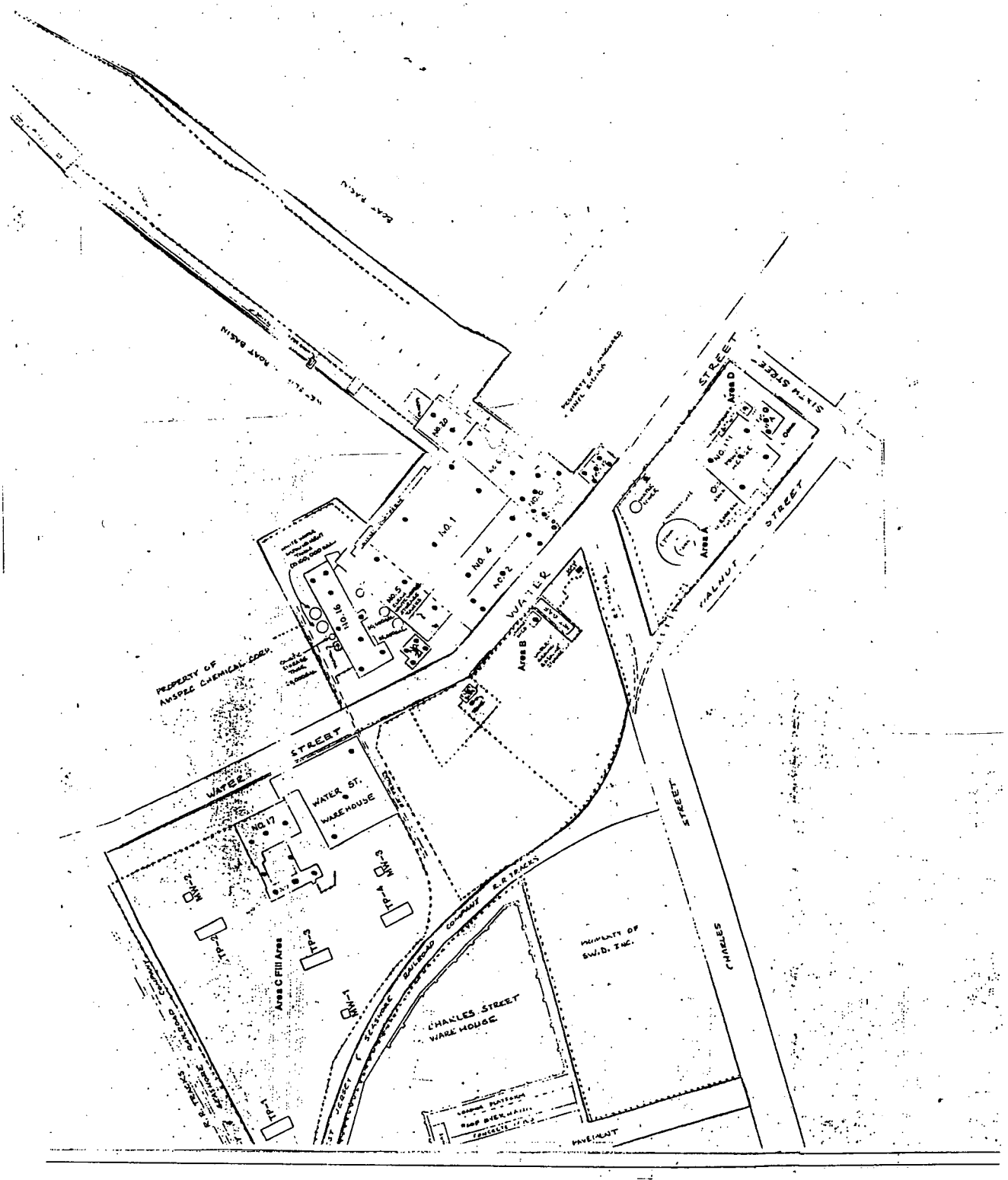
MAPS



MAP 1

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

Site Location



MAP 2

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

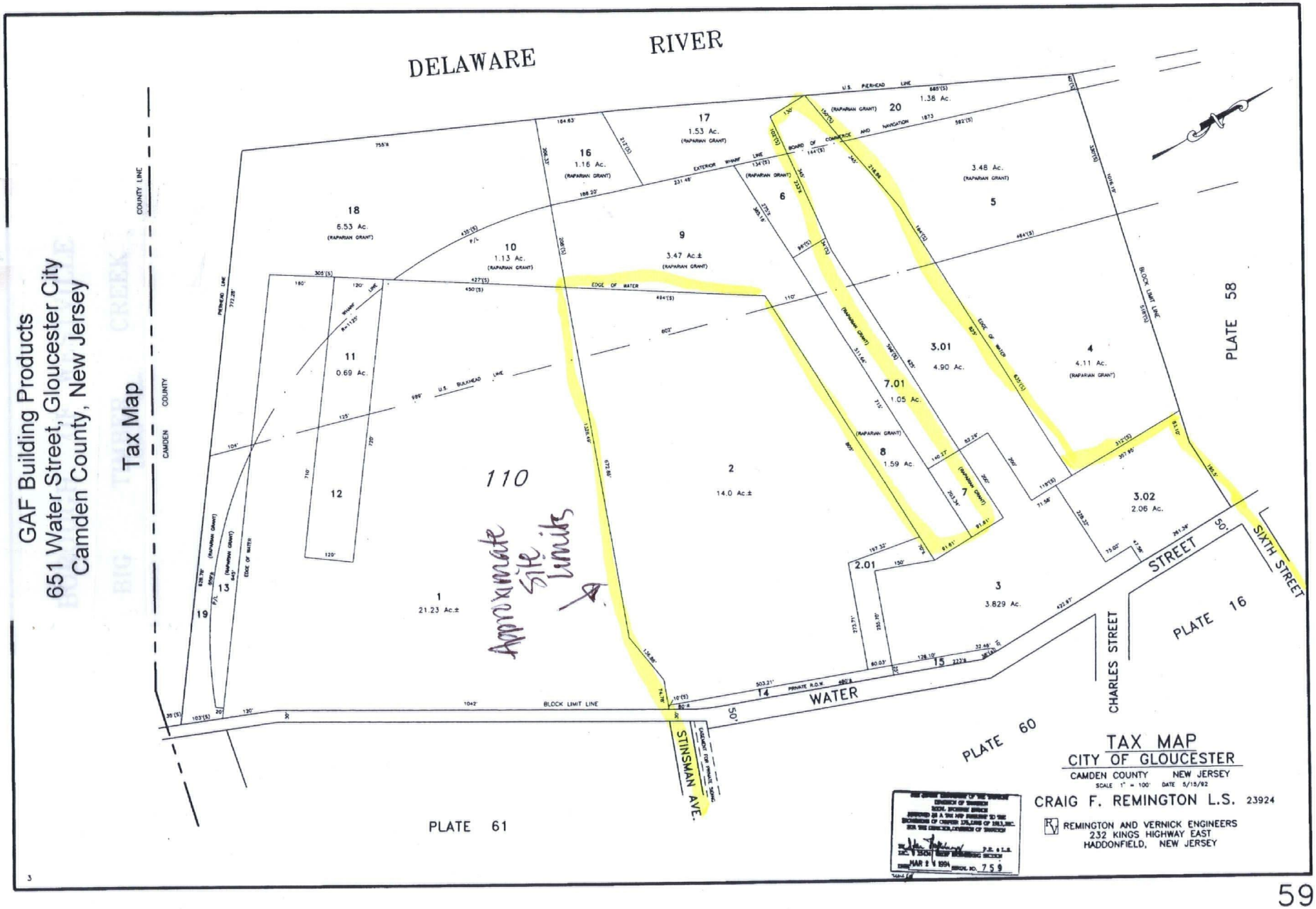
Site Map

59

MAP 3

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

Tax Map



TAX MAP
CITY OF GLOUCESTER
CAMDEN COUNTY NEW JERSEY
SCALE 1" = 100' DATE 5/15/92

CRAIG F. REMINGTON L.S. 23924

REMINGTON AND VERNICK ENGINEERS
232 KINGS HIGHWAY EAST
HADDONFIELD, NEW JERSEY

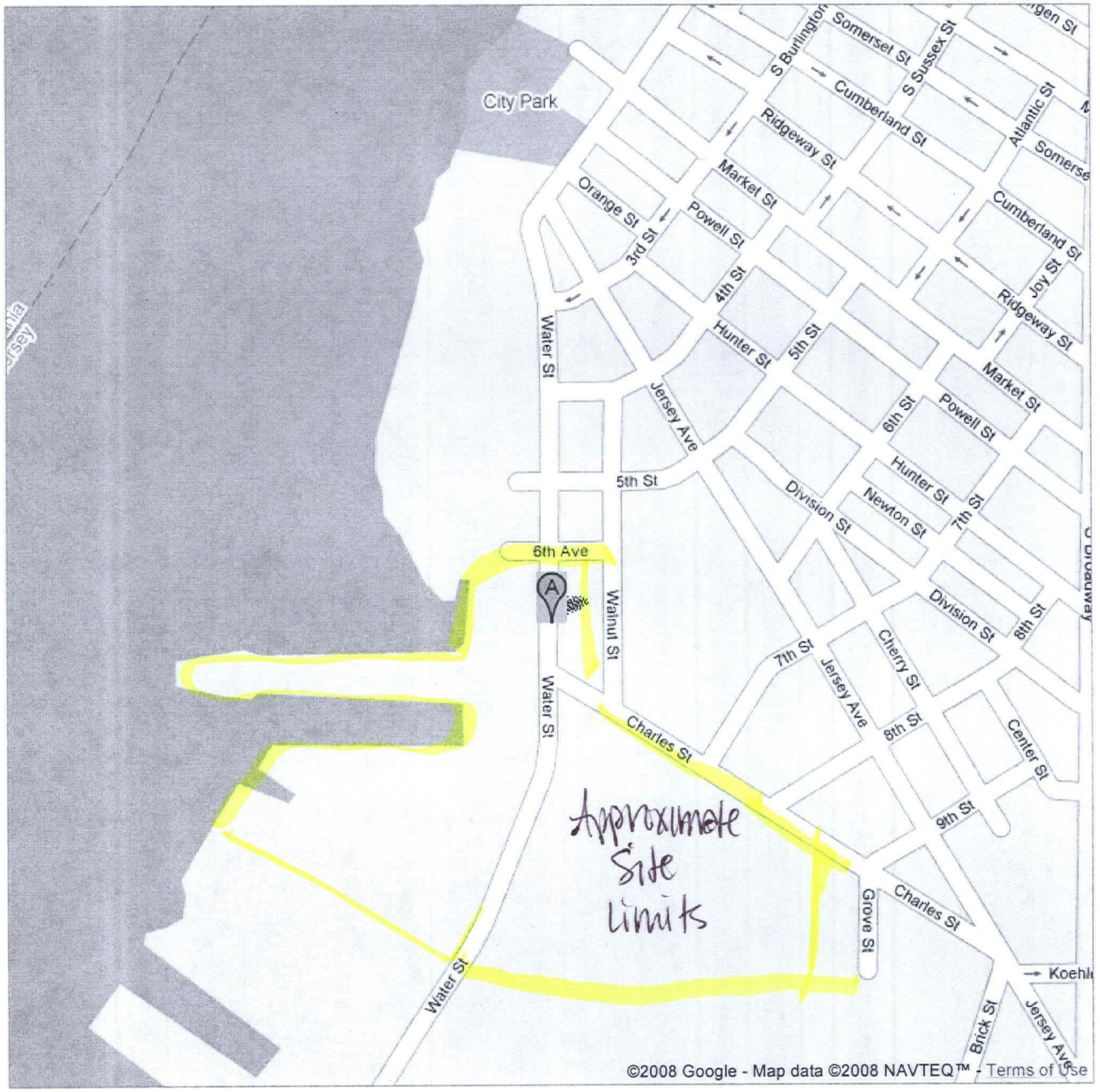
MAR 2 6 1994

3

59

Google Maps

Address **651 Water St**
Gloucester City, NJ 08030



MAP 4

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

Road Map

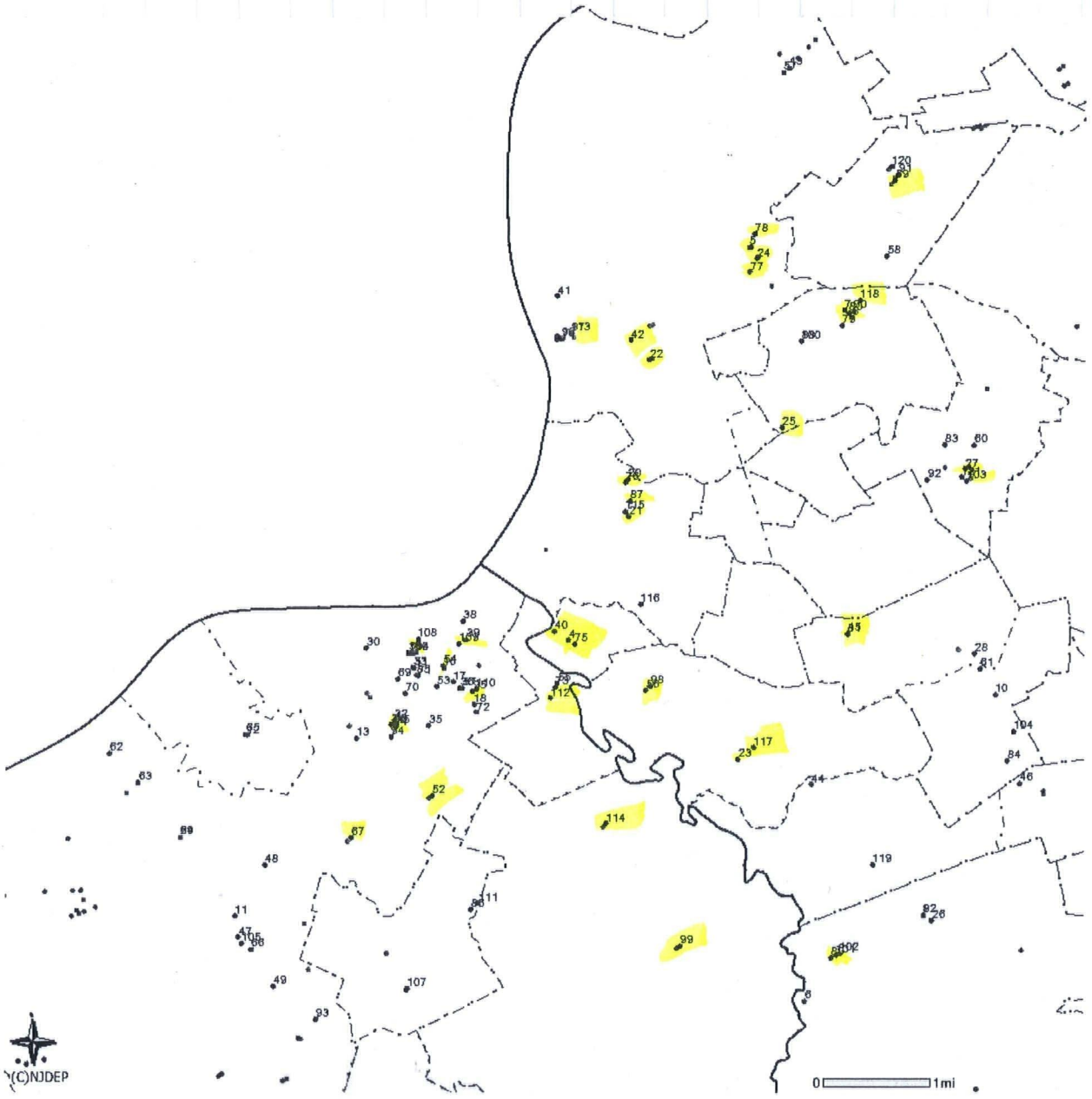
100,000 GPD WATER WITHDRAWAL POINTS WITHIN 5 Miles OF :
X : 315670
Y : 385672

SCALE : 1 : 63,360

PLOT PRODUCED BY :
NJDEP
WATER SUPPLY
BUREAU OF WATER ALLOCATION
P.O. Box 426
TRENTON, NJ 08625
DATE : 8/12/2008

SUBJECT TO REVISION

39 53.26
75.07.44



MAP 5

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

Water Withdrawal Points Map

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Withdrawal Points Tabular Data

Sequence Number (BWA)	PI ID Number (Preferred NJEMS ID)	PI Name	Activity Number	SI Category Code	SI Designation	SI Description	Distance From XY Origin - ft. (BWA)	County Code (Location Point)	Municipality Code (Location Point)	SPC83X	SPC83Y	XY Accuracy + Units Code	Dep to Top of Open Interval + Units	Dep To Btm of Open Interval + Units	Z (Elevation)	Z Accuracy + Units Code	Geologic Unit Code	Hydrogeologic Unit Code	Rated Pump Capacity + Units Code	BRDGBWASUBJITEMID (BWA)
1	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040311	WELL LPH-2	11229.16	08	21	308307.00	377193.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm	13504
2	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LAKE CAVIEZEL	TRENCH RW-3	8331.53	08	20	309029.00	380640.00	10ft			10	10Feet	2200	2662	25gm	15339
3	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LAKE CAVIEZEL	TRENCH RW-2	8218.15	08	20	309161.00	380654.00	10ft			10	10Feet	2200	2662	25gm	15489
4	5030	BROOKLAWN BOROUGH WATER DEPT	WAP990001	WSWL	3100014471	WELL 3	1-2 4505.20	04	07	316808.32	381312.61	100ft	300ft	320ft	10	10Feet	2190	2660	350gm	77
5	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	3100009574	PARKSIDE 18	3-4 17653.34	04	08	325587.67	400275.41	100ft	258ft	288ft	40	5Feet	2290	2666	1200gm	6405
6	10752W	CAMDEN COUNTY MUA SLUDGE INCINERATOR	WUR940001	WSWL	3100005802	WELL 1	25340.33	04	15	328416.96	363770.89				40	10Feet	2190	2660	250gm	9759
7	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	3100004799	WELL 6	3-4 18635.37	04	12	330271.31	397250.31	1000ft	219ft	312ft	10	10Feet	2190	2660	1000gm	14901
8	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	3100004053	WELL 2	3-4 18706.76	04	12	330629.27	396903.29	100ft	248ft	278ft	12.00	10Feet	2190	2660	700gm	14906
9	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100004756	OTTERBROOK WELL 29	25665.95	04	15	334231.41	367945.80	40ft	612ft	712ft	60	10Feet	2290	2666	1050gm	1381
10	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100040970	HADDON HEIGHTS WELL 63	23146.49	04	03	337728.94	378661.02	40ft	333ft	509ft	55	10Feet	2290	2666	1040gm	1388
11	GL0162	WILLIAM DEHART FARM	AGC060001	WSIN	INTAKE 1	POND 1 (PUMP 1)	23387.23	08	20	300485.33	367883.91	100ft			9.22564	10Feet			750gm	8275
12	5153	NATIONAL PARK BOROUGH WATER DEPT	WAP070001	WSWL	3100017938	WELL 6	3-4 17168.44	08	12	301052.94	376665.58	40ft	240ft	275ft	22	10Feet	2190	2660	600gm	16087
13	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100017788	WELL 6A	13039.97	08	20	306414.00	376486.00	10ft	256ft	335ft	18	10Feet	2290	2666	800gm	13500
14	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040314	WELL LPH-6	11350.14	08	21	308311.00	377030.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm	13507
15	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040310	WELL LPH-1	11240.26	08	21	308383.00	377113.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm	13503
16	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	COPELAND COVE	INTAKE CC-1	7601.34	08	20	310687.00	379931.00	10ft			15	10Feet	2200	2662	35gm	15488
17	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK 6	TK-6E	7833.12	08	20	311154.00	379271.00	10ft			20	10Feet	2200	2662	25gm	15487
18	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK 47-CN	TK-47CN	8299.25			312175.92	378143.49	100ft			20	10Feet	2190	2660	25gm	15490
18	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK 47-CN	TK-47CN	8299.25			312175.92	378143.49	100ft			20	10Feet	2190	2660	6gm	15490
19	2148P	MAFCO WORLDWIDE CORP	WAP050001	WSIN	INTAKE 1	DELAWARE RIVER BOX BOARD # 1	10264.77	04	08	316457.28	395906.04	100ft			11.81	10Feet			1500gm	15945

20	5010	GLOUCESTER CITY WATER DEPT	WAP990001	WSWL	3100027737	WELL 41	5239.71	04	14	319696.64	389023.81	1000ft	225ft	265ft	10	10Feet	2290	2666	1000gm	17245
21	5010	GLOUCESTER CITY WATER DEPT	WAP990001	WSWL	3100005242	WELL 42	14364.23	04	14	319733.66	387262.20	100ft		306ft	15	10Feet	2290	2666	1000gm	17247
22	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	5100000060	CITY 7	10471.56	04	08	320720.81	394844.28	100ft	123ft	163ft	20	5Feet	2290	2666	1500gm	6548
23	5223	BELLMAWR BOROUGH WATER DEPT	WAP990001	WSWL	3100004969	WELL 4	13886.45	04	04	325110.97	375488.47	100ft	380ft	554ft	50	10Feet	2290	2666	1000gm	2974
24	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	3100001250	PARKSIDE 17	17460.11	04	08	325973.78	399766.92	100ft	230ft	265ft	34	5Feet	2290	2666	1500gm	6400
25	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	3100004797	WELL 7	12987.37	04	12	327244.06	391562.58	100ft	224ft	313ft	10	10Feet	2190	2660	1000gm	14904
26	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100005041	OTTERBROOK WELL 34	26120.43	04	15	334623.57	367698.62	40ft	288ft	377ft	55	10Feet	2200	2662	1050gm	1383
27	5235	HADDON TWP WATER DEPT	WAP000001	WSWL	3100005243	WELL 1A	20892.81	04	16	336193.07	389582.80	100ft	401ft	479ft	53.5	10Feet	2190	2660	870gm	812
28	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100002434	HADDON HEIGHTS WELL 15	21596.07	04	18	336683.41	380690.39	40ft	455ft	597ft	66	10Feet	2290	2666	800gm	1658
29	11100W	VILLAGE AT RIVERWINDS HOA	WUR010001	WSWL	3100059257	WELL 1	22682.57	08	20	297817.36	371678.85	1000ft		180ft	10	10Feet	2200	2662	40gm	8673
30	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	DELAWARE RIVER	INTAKE DK-3	10011.92	08	20	306863.00	380909.00	10ft			10	10Feet			1500gm	15485
30	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	DELAWARE RIVER	INTAKE DK-3	10011.92	08	20	306863.00	380909.00	10ft			10	10Feet			2000gm	15485
30	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	DELAWARE RIVER	INTAKE DK-3	10011.92	08	20	306863.00	380909.00	10ft			10	10Feet			3200gm	15485
30	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	DELAWARE RIVER	INTAKE DK-3	10011.92	08	20	306863.00	380909.00	10ft			10	10Feet			500gm	15485
31	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040312	WELL LPH-4	11396.74	08	21	308093.00	377158.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm	13505
32	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100042139	WELL LPH-3	11142.29	08	21	308269.00	377342.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm	13502
33	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK FARM SEP	TFS-NE	8663.27	08	20	309154.00	379962.00	10ft			10	10Feet	2200	2662	25gm	15343
34	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LAKE CAVIEZEL	TRENCH RW-1	8080.09	08	20	309311.00	380686.00	10ft			10	10Feet	2200	2662	25gm	15340
35	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK 26	TK-26	10308.53	08	20	309937.00	377104.00	10ft			20	10Feet	2200	2662	25gm	15338
36	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100069144	WELL 14-2	7928.59	08	20	311465.32	378949.46	100ft	2ft	22ft	20	10Feet	2200	2662	25gm	13510
37	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100069143	WELL 14-1	7865.82	08	20	311584.93	378949.46	100ft	2ft	22ft	20	10Feet	2200	2662	25gm	13509
38	2365P	WHEELABRATOR GLOUCESTER CO LP	WAP980001	WSIN	DELAWARE RIVER	INTAKE 1	5333.94	08	20	311619.89	382200.15	1000ft								11812
39	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LANDFILL	TRENCH LF-D	5865.34	08	20	311748.00	381310.00	10ft			10	10Feet	2200	2662	25gm	15347
40	5030	BROOKLAWN BOROUGH WATER DEPT	WAP990001	WSWL	3100019765	WELL 4	3973.72	04	07	316109.58	381722.24	100ft	263ft	293ft	10	10Feet	2190	2660	350gm	76

41	11007W	CAMDEN COUNTY MUA	WUR980001	WSWL	5100054944	WELL 1	12291.34	04	08	316174.22	397952.51	1000ft					2260	2664	500gm	16417
42	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	3100063444	CITY 11	10948.40	04	08	319821.19	395802.28	100ft	124ft	154ft	20	5Feet	2290	2666	1010gm	6410
43	5188X	NJ AMERICAN WATER WESTERN DIV	WAP040003	WSWL	3100020270	WELL 55	26192.41	04	08	327516.32	409031.73	100ft	136ft	176ft	11	10Feet	2290	2666	1050gm	1540
44	10367W	RUNNEMEDE ASPHALT	WUR930001	WSWL	3100004633	WELL 2	17314.57	04	30	328719.44	374291.86	500ft	196ft	222ft	50	10Feet	2190	2660	175gm	3064
45	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100005054	EGBERT WELL 35	15350.15	04	18	330485.60	381657.28	40ft	422ft	484ft	38	10Feet	2290	2666	700gm	1384
46	10597W	BARRINGTON BUSINESS CENTER	WUR920001	WSWL	3100002493	WELL 2	25883.56	04	23	338935.43	374328.63	500ft	290ft	320ft			2190	2660	1000gm	6833
47	GL0162	WILLIAM DEHART FARM	AGC060001	WSIN	INTAKE 2	POND 1 (PUMP 2)	24077.44	08	20	300635.93	366864.33	100ft			8.09804	10Feet			750gm	8276
48	CU299R	CARLS NURSERY	AGR010001	WSWL	3500014039	WELL 1	20586.05	06	13	301940.81	370331.88	500ft	107ft	127ft			1680	1451	60gm	8562
49	10231W	WOODBURY COUNTRY CLUB	WUR960001	WSWL	3100003393	WELL 1	25039.13	08	22	302364.42	364460.00	500ft					2190	2660	500gm	10652
50	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100065999	WELL RW-5	8368.75	08	21	308948.00	380686.00	20ft	5ft	25ft	10	10Feet	2200	2662	25gm	13501
51	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK FARM SEP	TFS-NW	8633.58	08	20	309213.00	379940.00	10ft			10	10Feet	2200	2662	25gm	15342
52	5304	WEST DEPTFORD TWP DPW	WAP050001	WSWL	3100017452	WELL 7	13207.75	08	20	310135.71	373679.02	40ft	323ft	363ft	26.99	1Meters	2190	2660	1000gm	1276
53	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100000028	WELL 5A	8515.10	08	20	310342.00	379029.00	10ft	237ft	277ft	10	10Feet	2290	2666	1000gm	15493
54	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040315	WELL CC-2	7529.65	08	21	310658.00	380052.00	20ft	2.5ft	17.5ft	15	10Feet	2200	2662	25gm	13508
55	5319	WESTVILLE BOROUGH WATER DEPT	WAP000001	WSWL	3100017923	WELL 6	6505.61	08	21	316247.74	379191.66	100ft	267ft	317ft	20		2190	2660	1000gm	9465
56	5223	BELLMAWR BOROUGH WATER DEPT	WAP990001	WSWL	3100019218	WELL 6	8417.08	04	04	320611.45	378857.89	100ft	330ft	381ft	25	10Feet	2260	2664	1000gm	2972
57	5188X	NJ AMERICAN WATER WESTERN DIV	WAP040003	WSWL	3100004847	WELL 52	25865.13	04	08	327240.17	408804.36	100ft	147ft	198ft	18	10Feet	2290	2666	1050gm	1537
58	10250W	BISHOP EUSTACE PREPARATORY SCHOOL	WUR950001	WSWL	3100017884	WELL 1	21876.09	04	27	332313.69	399867.96	1000ft	135ft	150ft	10	10Feet	2190	2660	200gm	7323
59	5173	MERCHANTVILLE-PENNSAUKEN WATER COMMISSION	WAP060001	WSWL	3100005641	BROWNING 1A	24681.91	04	24	332707.00	403530.00	40ft	132ft	152ft	20	20Feet	2190	2660	875gm	10303
60	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100004798	HADDON HEIGHTS WELL 30	21550.20	04	16	336623.42	390706.43	40ft	224ft	275ft	67	10Feet	2200	2662	800gm	1382
61	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100003375	HADDON HEIGHTS WELL 20	22060.54	04	03	336974.65	379947.56	40ft	236ft	267ft	61	10Feet	2200	2662	700gm	1380
62	4073PS	RIVER WINDS @ WEST DEPTFORD	WAP990001	WSIN	INTAKE 1	DELAWARE RIVER	23523.03	08	20	294339.76	375753.40	500ft			10	1Feet			500gm	6819
63	4073PS	RIVER WINDS @ WEST DEPTFORD	WAP990001	WSIN	INTAKE 2	IRRIGATION POND	22939.56	08	20	295732.25	374325.88	500ft			10	1Feet			2500gm	6820
64	11100W	VILLAGE AT RIVERWINDS HOA	WUR010001	WSWL	3100059256	WELL 2	22682.57	08	20	297817.36	371678.85	1000ft		180ft	10	10Feet	2200	2662	40gm	9133
65	5153	NATIONAL PARK BOROUGH WATER DEPT	WAP070001	WSWL	3100002555	WELL 5	17234.86	08	12	300964.07	376683.40	40ft	241ft	282ft	22	10Feet	2190	2660	700gm	16086

66	GL0122	MEADOW LAKE FARMS	AGC050001	WSIN	INTAKE 2	MATTHEWS BRANCH	24195.42	08	20	301267.31	366229.53	150ft			17.9	5Feet			1000gm		14911
67	5304	WEST DEPTFORD TWP DPW	WAP050001	WSWL	5100000063	WELL 6	3-4 16937.68	08	20	306158.20	371656.63	40ft	322ft	372ft	23.49	1Meters	2190	2660	1000gm		1278
68	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100040313	WELL LPH-5	11313.49	08	21	308259.00	377123.00	20ft	2.5ft	17.5ft	10	10Feet	2200	2662	25gm		13506
69	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100000008	WELL 3	9589.72	08	20	308421.00	379393.00	10ft	258ft	288ft	18	10Feet	2290	2666	800gm		15492
70	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSWL	3100000007	WELL 1	9815.12	08	20	308789.00	378672.00	10ft	248ft	288ft	20	10Feet	2290	2666	900gm		15491
71	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK FARM SEP	TFS-SW	8737.02	08	20	309420.00	379566.00	10ft			10	10Feet	2200	2662	25gm		15344
72	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK 51	TK-51	8594.23	08	20	312273.00	377777.00	10ft			20	10Feet	2200	2662	25gm		15348
73	5319	WESTVILLE BOROUGH WATER DEPT	WAP000001	WSWL	3100003418	WELL 4	1-2 6700.27	08	21	316168.36	378989.85	100ft	286ft	313ft	20		2190	2660	750gm		9467
74	2148P	MAFCO WORLDWIDE CORP	WAP050001	WSIN	INTAKE 2	DELAWARE RIVER BOX BOARD # 2	10262.62	04	08	316428.74	395906.04	100ft			12.12	10Feet			400gm		15946
75	5030	BROOKLAWN BOROUGH WATER DEPT	WAP990001	WSWL	3100004325	WELL 1	1/4-1 4788.01	04	07	317118.72	381108.07	100ft	307ft	327ft	10	10Feet	2190	2660	300gm		78
76	5010	GLOUCESTER CITY WATER DEPT	WAP990001	WSWL	3100004903	REDRILLED	1/4-1 25066.46	04	14	319588.94	388882.15	100ft					2190	2660			17248
77	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	3100066163	PARKSIDE 17A	3-4 16708.45	04	08	325608.93	399102.19	100ft	215ft	285ft	34	5Feet	2290	2666	1500gm		6408
78	5302	CAMDEN CITY WATER DEPT	WAP000001	WSWL	3100000904	PARKSIDE 13	3-4 18338.73	04	08	325854.73	400921.87	500ft	185ft	225ft	30	5Feet	2290	2666	1200gm		3817
79	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	3100000079	WELL 1	3-4 18089.73	04	12	330159.22	396501.59	100ft	266ft	306ft	25	10Feet	2190	2660	650gm		14907
80	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	5100000030	WELL 4	3-4 18707.06	04	12	330474.77	397106.65	100ft	262ft	292ft	9	10Feet	2190	2660	870gm		14903
81	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100003308	EGBERT WELL 18	1-3 15360.03	04	18	330480.86	381602.36	40ft	144ft	190ft	37	10Feet	2200	2662	700gm		1379
82	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100005226	OTTERBROOK WELL 39	25672.85	04	15	334230.54	367934.90	40ft	269ft	349ft	60	10Feet	2200	2662	1400gm		1386
83	10221W	HADDON TWP HIGH SCHOOL	WUR070001	WSWL	3100060880	WELL 1A	20187.26	04	16	335211.22	390736.33	100ft	305ft	407ft	17.8	10Feet	2290	2666	80gm		4912
84	10597W	BARRINGTON BUSINESS CENTER	WUR920001	WSWL	3100002492	WELL 1	24850.36	04	03	338318.40	375445.40	500ft	285ft	315ft			2190	2660	1000gm		6834
85	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	TANK FARM SEP	TFS-SE	8764.80	08	20	309358.00	379590.00	10ft			10	10Feet	2200	2662	25gm		15345
86	5347X	WOODBURY CITY WATER DEPT	WAP990001	WSWL	3100064855	WELL 7	17844.04	08	22	312033.00	368202.00	100ft	161ft	294ft	20	10Feet	2260	2664	1000gm		17615
87	5010	GLOUCESTER CITY WATER DEPT	WAP990001	WSWL	3100004306	WELL 40	1/4-1 4741.18	04	14	319816.47	387969.93	100ft	221ft	261ft	10	10Feet	2290	2666	1000gm		17249
88	11020W	PARKVIEW APARTMENTS	WUR980001	WSWL	3100052469	WELL 2	16045.46	04	12	328157.86	395746.31	1000ft	110ft	130ft			2260	2664	70gm		11897
89	10908W	FRANKLIN SQUARE VILLAGE	WUR050001	WSWL	3100023362	WELL 2 - RIVER	24276.96	04	14	329704.69	365862.74	100ft	250ft	270ft	22	10Feet	2260	2664	50gm		8502
90	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	3100004054	WELL 3	3-4 18953.57	04	12	330709.13	397206.33	100ft	257ft	287ft	15.00	10Feet	2190	2660	800gm		14905

91	5173	MERCHANTVILLE-PENNSAUKEN WATER COMMISSION	WAP060001	WSWL	3100004836	BROWNING 2A	25018.37	04	27	332884.00	403826.00	40ft	110ft	140ft	20	20Feet	2190	2660	900gm	10237
92	5235	HADDON TWP WATER DEPT	WAP000001	WSWL	3100059128	WELL 5	18978.49	04	16	334348.88	389028.48	1000ft	355ft	445ft	50	10Feet	2190	2660	1000gm	813
93	2257P	WESTWOOD GOLF CLUB	WAP060001	WSWL	3100055397	WELL 3	25410.74	08	20	304468.00	362863.00	100ft	119ft	144ft	20	10Feet	2190	2660	325gm	18079
94	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	FURFURAL	TRENCH F-1	11848.61	08	20	308105.00	376552.00	10ft			20	10Feet	2200	2662	25gm	15486
95	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	PUMPHOUSE	INTAKE PH-2	7757.07	08	20	312080.00	378795.00	10ft			20	10Feet	2200	2662	25gm	13511
96	2148P	MAFCO WORLDWIDE CORP	WAP050001	WSIN	INTAKE 3	DELAWARE RIVER BOX BOARD # 3	10258.56	04	08	316371.67	395906.04	100ft			12.20	10Feet			400gm	15947
97	2148P	MAFCO WORLDWIDE CORP	WAP050001	WSWL	3100042789	WELL 3R	10504.09	04	08	316878.63	396105.81	100ft	86ft	146ft	16.778	10Feet	2190	2660	250gm	15949
98	5223	BELLMAWR BOROUGH WATER DEPT	WAP990001	WSWL	3100002687	WELL 3	8398.35	04	04	320846.71	379058.65	100ft	334ft	359ft	20	10Feet	2260	2664	800gm	3494
99	5336	DEPTFORD TWP MUA	WAP070001	WSWL	3100037705	WELL 8	20385.94	08	02	322328.16	366403.67	40ft	198ft	258ft	57.52	10Feet	2190	2660	1000gm	12289
100	11020W	PARKVIEW APARTMENTS	WUR980001	WSWL	3100052468	WELL 1	16045.46	04	12	328157.86	395746.31	1000ft	110ft	130ft			2260	2664	70gm	11898
101	10908W	FRANKLIN SQUARE VILLAGE	WUR050001	WSWL	3100052318	WELL 1 - POND	24312.13	04	15	329962.86	366004.72	100ft	258ft	278ft	35	10Feet	2260	2664	50gm	8501
102	10908W	FRANKLIN SQUARE VILLAGE	WUR050001	WSWL	3100047448	WELL 3 - COURTYARD	24351.96	04	14	330127.77	366076.11	100ft			37	10Feet	2260	2664	50gm	8503
103	5235	HADDON TWP WATER DEPT	WAP000001	WSWL	3100028896	WELL 3A	20860.85	04	16	336267.22	388975.23	100ft	420ft	472ft	53.	10Feet	2190	2660	750gm	811
104	10029W	WEYERHAEUSER PAPER CO	WUR930001	WSWL	3100005360	WELL 1	24601.49	04	03	338638.96	376859.99	500ft	255ft	285ft	80	5Feet	2190	2660	125gm	15681
105	GL0122	MEADOW LAKE FARMS	AGC050001	WSIN	INTAKE 1	POND 1	24233.94	08	20	300797.01	366538.09	150ft			10.6	5Feet			1000gm	14910
106	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LAKE CAVIEZEL	TRENCH RW-4	8400.84	08	20	308940.00	380643.00	10ft			10	10Feet	2200	2662	25gm	15341
107	5347X	WOODBURY CITY WATER DEPT	WAP990001	WSWL	3100048755	WELL 9	22362.26	08	22	308944.00	364344.64	100ft	375ft	456ft	20	10Feet	2290	2666	1000gm	17617
108	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	DELAWARE RIVER	DOCK 1-A	7615.59	08	20	309426.00	381311.00	10ft			10	10Feet			2500gm	15350
109	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	LANDFILL	TRENCH LF-A	6235.12	08	20	311421.00	381108.00	10ft			10	10Feet	2200	2662	25gm	15346
110	2205P	SUNOCO INC (R&M) EAGLE POINT FACILITY	WAP060001	WSIN	GTA-NORTH	TRENCH D-1	7568.98	08	20	312268.00	378910.00	10ft			20	10Feet	2200	2662	25gm	15349
111	5347X	WOODBURY CITY WATER DEPT	WAP990001	WSWL	3100048720	WELL 8	17443.51	08	22	312401.00	368537.00	100ft	160ft	306ft	20	10Feet	2260	2664	1000gm	17616
112	5319	WESTVILLE BOROUGH WATER DEPT	WAP000001	WSWL	3100005689	WELL 5	7190.68	08	21	315930.93	378485.60	100ft	213ft	274ft	20		2190	2660	1000gm	9466
113	2148P	MAFCO WORLDWIDE CORP	WAP050001	WSWL	3100000290	WELL 1	10507.36	04	08	316906.77	396105.81	100ft	81ft	103ft	16.778	10Feet	2190	2660	225gm	15948
114	5336	DEPTFORD TWP MUA	WAP070001	WSWL	3100005513	WELL 4	13640.14	08	02	318676.97	372367.04	40ft	282ft	361ft	39.3	10Feet	2190	2660	700gm	12286
115	5010	GLOUCESTER CITY WATER DEPT	WAP990001	WSWL	3100018822	WELL 43	4301.55	04	14	319579.19	387465.64	100ft	220ft	260ft	10	10Feet	2290	2666	1000gm	17246
116	10063W	GLOUCESTER CIT JUNIOR/SENIOR HIGH SCHOOL	WUR930001	WSWL	3100004482	WELL 1	5371.06	04	14	320357.17	383049.44	500ft			15	5Feet	2190	2660	290gm	7474

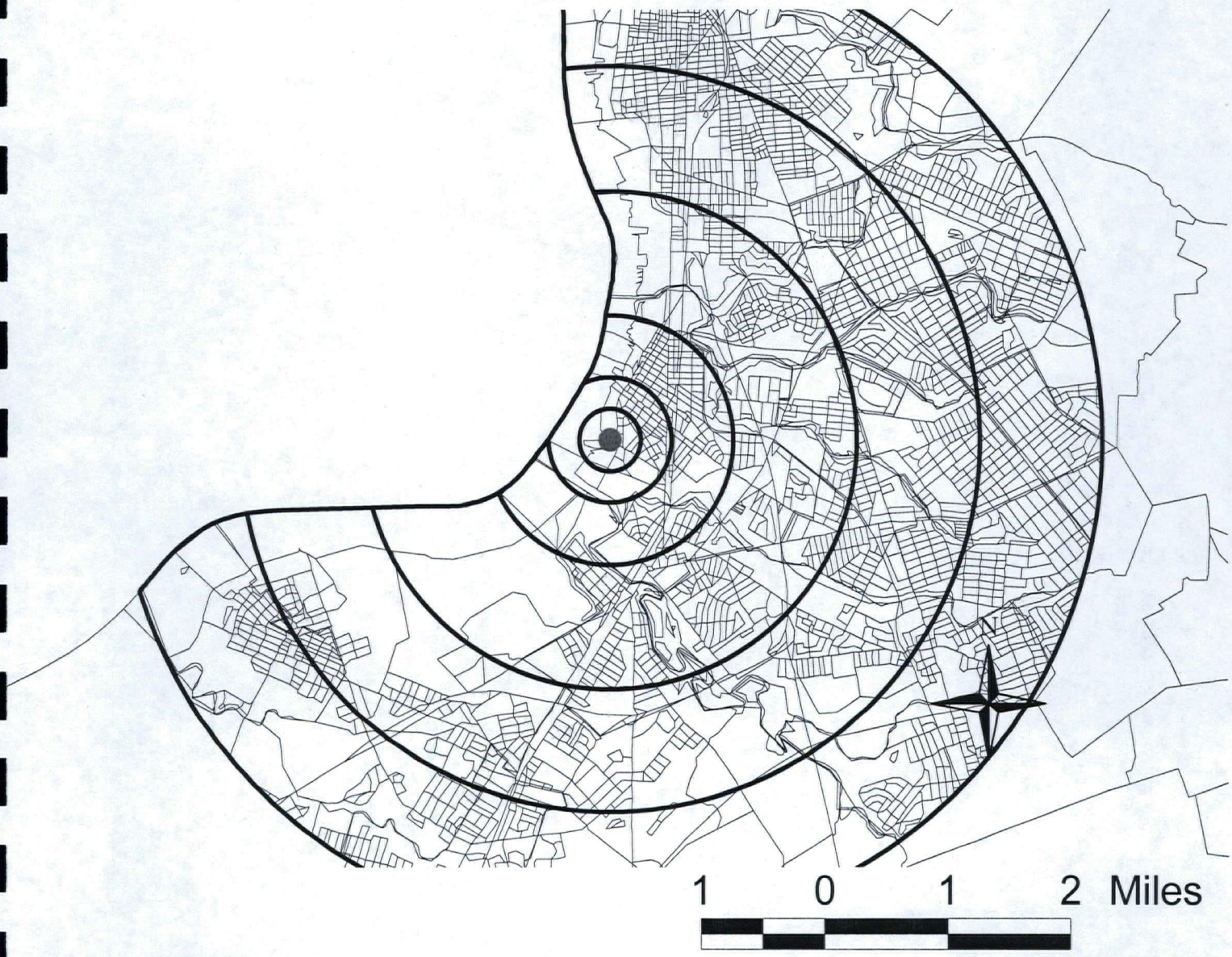
117	5223	BELLMAWR BOROUGH WATER DEPT	WAP990001	WSWL	3100012315	WELL 5	2-3 14012.52	04	04	325894.71	376090.37	100ft	458ft	557ft	50	10Feet	2290	2666	1000gm	2973
118	5209	COLLINGSWOOD BOROUGH WATER DEPT	WAP990001	WSWL	5100000031	WELL 5	3-4 19511.19	04	12	331024.00	397710.22	100ft	248ft	278ft	10	10Feet	2190	2660	1000gm	14902
119	5188X	NJ AMERICAN WATER WESTERN DIV	WAP050004	WSWL	3100003307	RUNNEMEDE WELL 19	22179.16	04	30	331739.17	370384.77	40ft	297ft	338ft	67	10Feet	2200	2662	770gm	1378
120	5173	MERCHANTVILLE-PENNSAUKEN WATER COMMISSION	WAP060001	WSWL	3100043933	BROWNING 3A	25100.84	04	27	332566.00	404234.00	40ft	108ft	180ft	20	20Feet	2190	2660	1000gm	10300
121	5235	HADDON TWP WATER DEPT	WAP000001	WSWL	3100029099	WELL 2A	20664.90 3-4	04	16	336034.70	389179.05	100ft	430ft	473ft	54.	10Feet	2190	2660	800gm	810

3

POPULATION

MAP 6

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey
Lat: 39° 53' 26.00" , Long: -75° 7' 44.00"

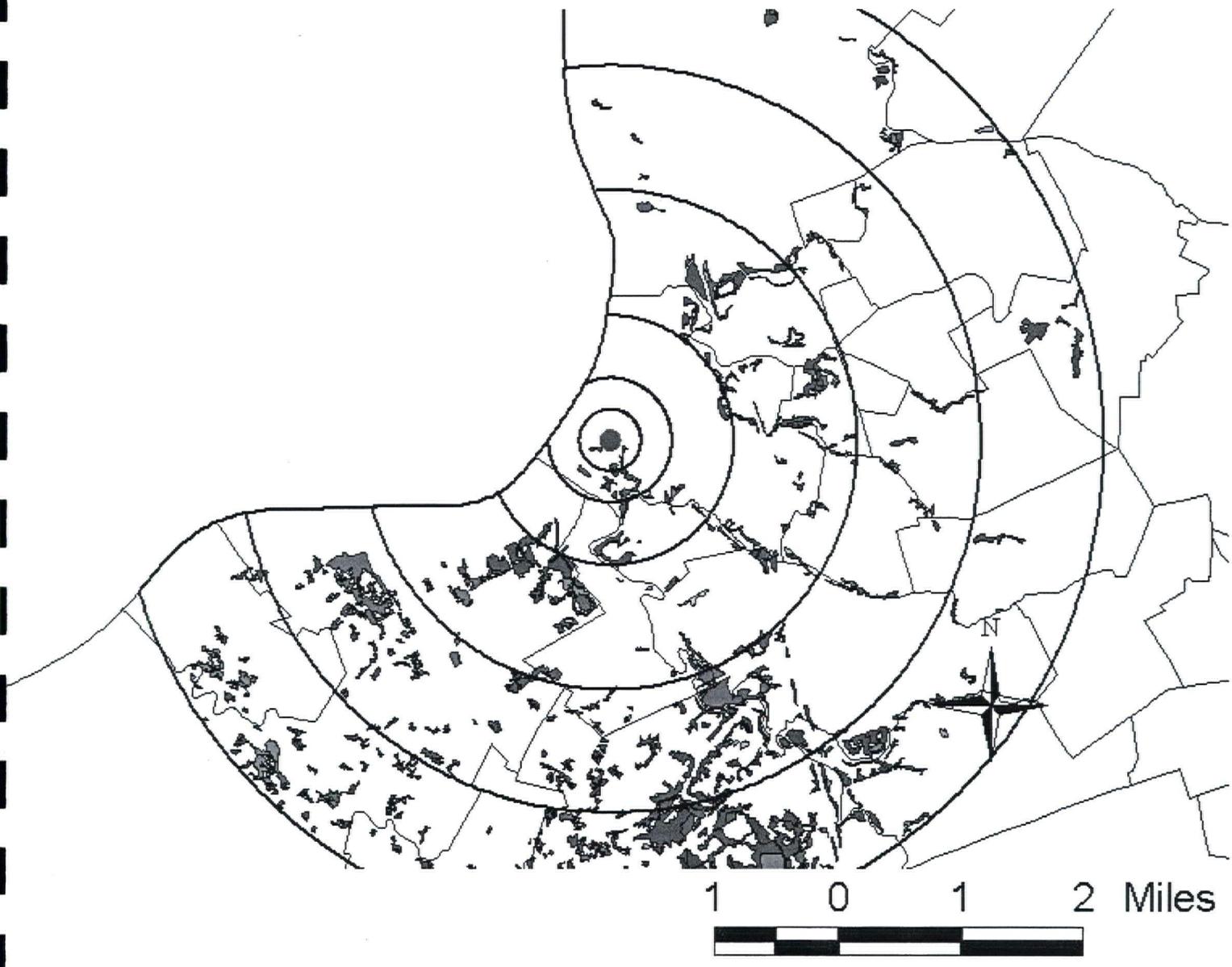


Ring	1	(0.00- 0.25)	has Population:	73
Ring	2	(0.25- 0.50)	has Population:	2537
Ring	3	(0.50- 1.00)	has Population:	7096
Ring	4	(1.00- 2.00)	has Population:	23136
Ring	5	(2.00- 3.00)	has Population:	51011
Ring	6	(3.00- 4.00)	has Population:	64913

*Based on 2000 Census Data.

WETLAND ACRES
GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey
Lat: 39° 53' 26.00" , Long: -75° 7' 44.00"

MAP 7



Ring	1	(0.00- 0.25)	has Wetlands Acres:	5
Ring	2	(0.25- 0.50)	has Wetlands Acres:	16
Ring	3	(0.50- 1.00)	has Wetlands Acres:	42
Ring	4	(1.00- 2.00)	has Wetlands Acres:	334
Ring	5	(2.00- 3.00)	has Wetlands Acres:	439
Ring	6	(3.00- 4.00)	has Wetlands Acres:	829

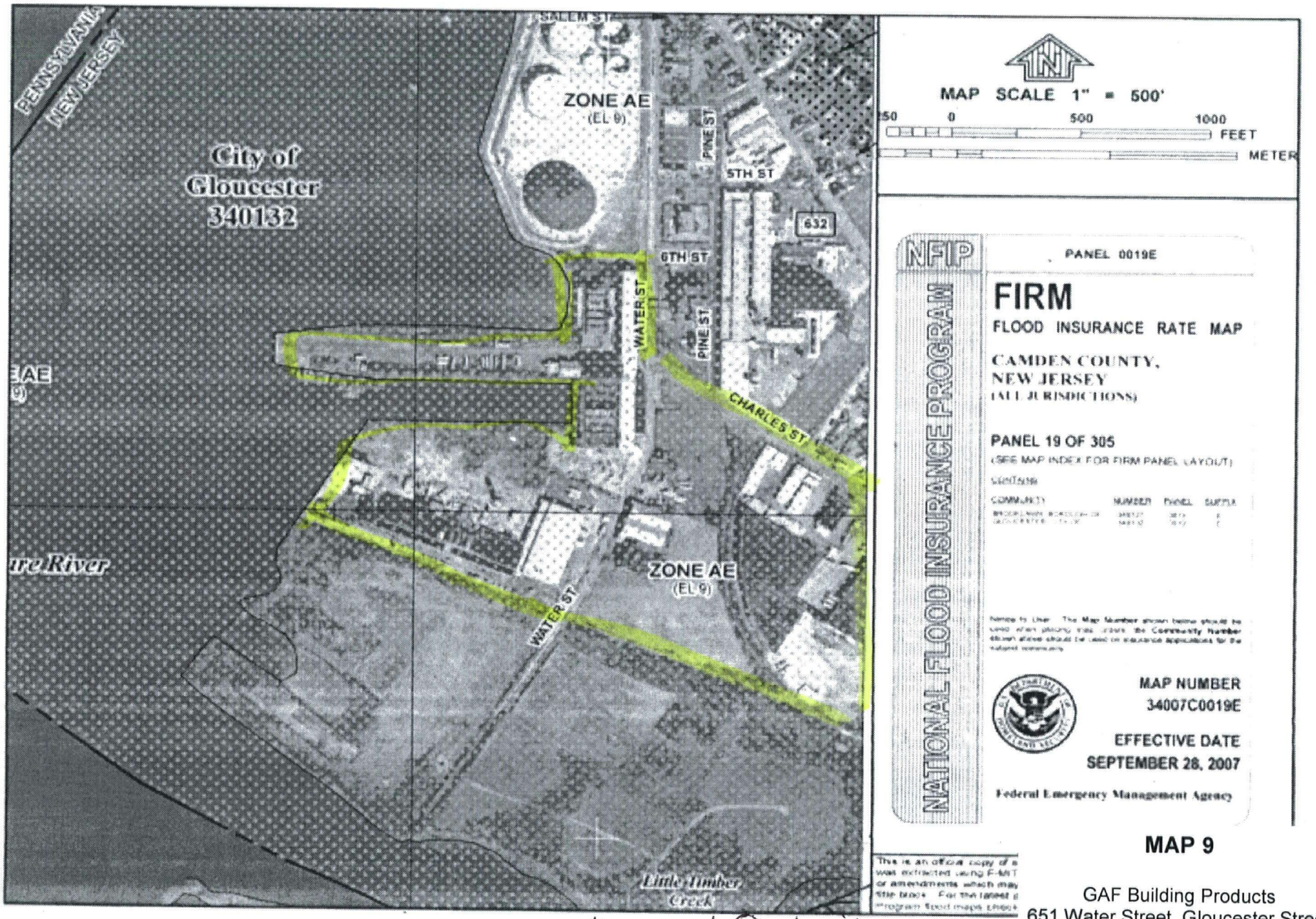
*Based on 1986 Land Use/Land Cover Data

Approximate Site limits in yellow

MAP 8

GAF Building Products
651 Water Street, Gloucester City
Camden County, New Jersey

State Designated Well Head Protection Areas



Approximate Site Limits in Yellow

MAP 9

GAF Building Products
651 Water Street, Gloucester Street
Camden County, New Jersey

FEMA Flood Insurance Rate Map

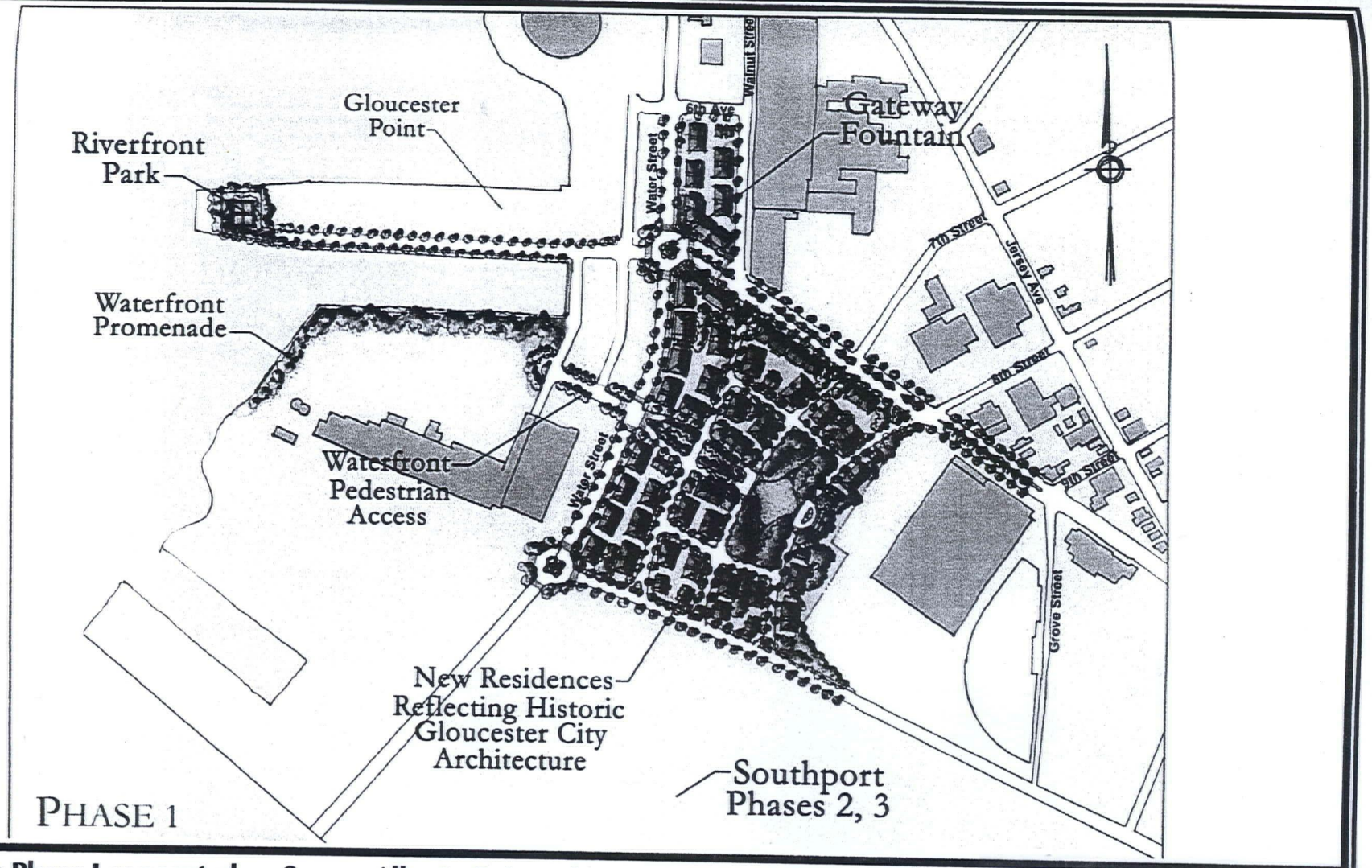


Figure 4: Phase I concept plan. Source Alberto & Associates (2005).

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FEET

Phase IA Cultural Resource Reconnaissance
Keating Urban Partners LLC - Southport Redevelopment
Gloucester City, Camden County, New Jersey

MAP 10

GAF Building Products
651 Water Street, Gloucester Street
Camden County, New Jersey

Brownfields Redevelopment Area

ATTACHMENT A

SA 86

SA-86

SITE INSPECTION

GAF CORPORATION

AKA: GENERAL ANILINE AND FILM

GLOUCESTER CITY, CAMDEN COUNTY

EPA ID NO.: NJD043292606

New Jersey Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Bureau of Site Assessment

GAF CORPORATION
AKA: GENERAL ANILINE AND FILM
WATER AND CHARLES STREETS
GLOUCESTER CITY, CAMDEN COUNTY, NEW JERSEY
EPA ID NO. NJD043292606

TABLE OF CONTENTS

I. NEWSPAPER ARTICLE IN GLOUCESTER CITY NEWS REGARDING GAF SITE; OCTOBER 1986

J. NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/BUREAU OF ECRA APPLICABILITY AND COMPLIANCE (DHWM/BEAC) REPORT OF GAF SITE VISIT; APRIL 23, 1987

K. NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/SOUTHERN BUREAU OF FIELD OPERATIONS (DHWM/SBFO) INVESTIGATION REPORT OF THE GAF SITE; APRIL 27, 1987

L. PRELIMINARY ASSESSMENT OF GAF CORPORATION PREPARED BY THE NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/BUREAU OF PLANNING AND ASSESSMENT (DHWM/BPA); JUNE 10, 1987

M. NOTICE OF VIOLATION ISSUED TO GAF FROM THE NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/SOUTHERN BUREAU OF FIELD OPERATIONS (DHWM/SBFO); JULY 28, 1987

N. TELECON NOTE BETWEEN NUS CORPORATION AND DELAWARE RIVER BASIN COMMISSION; FEBRUARY 14, 1989

O. PRELIMINARY ASSESSMENT OF GAF CORPORATION PREPARED BY NUS CORPORATION; MARCH 23, 1989

P. NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/SOUTHERN BUREAU OF FIELD OPERATIONS (DHWM/SBFO) INVESTIGATION OF GAF CORPORATION; JANUARY 9, 1990

Q. NJDEP/DIVISION OF HAZARDOUS WASTE MANAGEMENT/BUREAU OF HAZARDOUS WASTE ENGINEERING (DHWM/BHWE) SITE INSPECTION REPORT OF GAF FACILITY; JANUARY 9, 1990

R. GAF SITE EVALUATION SUBMISSION; APRIL 24, 1990

S. SAMPLING PLAN PROPOSAL FOR GAF PREPARED BY ENVIRONMENTAL SCIENCE AND ENGINEERING, INC., PLYMOUTH MEETING, PENNSYLVANIA; APRIL 1990

T. AMENDED GENERAL INFORMATION SUBMISSION FOR GAF CORPORATION; OCTOBER 1, 1990

U. REVISED SAMPLING PLAN PROPOSAL FOR THE GAF FACILITY PREPARED BY ENVIRONMENTAL SCIENCE AND ENGINEERING, INC., PLYMOUTH MEETING, PENNSYLVANIA; JANUARY 1991

V. LETTER FROM ENVIRONMENTAL SCIENCE AND ENGINEERING, INC. TO NJDEP/DHWM/BUREAU OF ENVIRONMENTAL EVALUATION CLEANUP AND RESPONSIBILITY ASSESSMENT REGARDING AERIAL PHOTOGRAPH REVIEW OF GAF SITE; JUNE 27, 1991

W. LETTER FROM NJDEP/DHWM/BHWE TO GAF REGARDING DELISTING OF GAF FACILITY FROM TREATMENT, STORAGE AND DISPOSAL STATUS; SEPTEMBER 9, 1991

X. ASBESTOS SURVEY REPORT FOR GAF FACILITY PREPARED BY RESOURCE MANAGEMENT, INC., MEDIA, PENNSYLVANIA; OCTOBER 1991

Y. ECRA SAMPLING RESULTS REPORT AND PROPOSED CLEANUP PLAN FOR GAF FACILITY, PREPARED BY LANGAN ENVIRONMENTAL SERVICES, INC., ELMWOOD PARK, NEW JERSEY; NOVEMBER 22, 1991

Z. SANBORN FIRE INSURANCE MAPS 1891, 1896, 1909 AND 1923

AA. COMPLIANCE EVALUATION INSPECTIONS - PUBLIC WATER SUPPLIES

BB. STATE AND FEDERAL THREATENED AND ENDANGERED SPECIES, PHILADELPHIA, CAMDEN, WOODBURY AND RUNNEMEDE QUADRANGLES

CC. SUPERIOR COURT OF NEW JERSEY APPELLATE DIVISION RULING REGARDING THE APPLICABILITY OF ECRA TO GAF BUILDING MATERIALS CORPORATION FACILITIES; JANUARY 6, 1992

NARRATIVE

GAF CORPORATION
AKA: GENERAL ANILINE AND FILM
WATER AND CHARLES STREETS
GLOUCESTER CITY, CAMDEN COUNTY, NEW JERSEY
EPA ID NO. NJD043292606

GENERAL INFORMATION AND SITE HISTORY

General Aniline and Film (GAF) Corporation encompasses approximately 36 acres at the intersection of Water and Charles Streets in Gloucester City, Camden County, New Jersey. The site includes Block 110, Lot 2A (which according to the Gloucester City tax office includes Lots 3, 3A, 4, 15, 17 and 20); Block 111, Lot 1; Block 116A, Lots 14A, 16, 17, 19 through 24, 14F, 15, 61 through 67 and 25 through 28; and Block 120A, Lot 3. GAF owned Block 110, Lot 3B until August 1981, when it sold this property to Vanguard Vinyl Siding, Inc.

The property is bordered to the south by the Amspec Corporation, to the west by the Delaware River and to the north by Vanguard Vinyl Siding, Inc. The estimated population residing within 4 miles of the site is 311,300. The nearest residence is located within 0.3 mile of the site.

The facility included a manufacturing plant, a power plant facility which generated and distributed steam to the manufacturing plant, a warehouse facility comprised of one large and a few smaller buildings (the Water Street Warehouse) and an additional warehouse (the Charles Street Warehouse). Prior to the closure of the manufacturing and power plant in 1983, the warehouses were used in part to store the roofing felt manufactured at the plant.

Sanborn Fire Insurance Maps show a hotel at the site from the late 1890s through the early 1900s. Prior to World War I the Pusey and Jones shipyard (also known as the Pennsylvania Shipbuilding Company) was constructed at the site. It is believed that Lang Mills had an existing paper mill operation adjacent to the shipyard. Prior to 1930, Lang Mills purchased a portion of the Pusey and Jones property and apparently converted the building to paper manufacturing. During the 1930s (approximately 1935) Lang Mills was acquired by the Ruberoid Company and continued to operate as a paper mill. In 1967 GAF and Ruberoid merged; GAF ceased operations at the site on December 31, 1983.

The New Jersey Department of Environmental Protection determined that cleanup responsibilities under the Environmental Cleanup Responsibility Act (ECRA) were triggered by GAF's cessation of its warehousing activities for a period of more than two years. This ruling was affirmed by the Superior Court of New Jersey, Appellate Division on January 6, 1992. Previous rulings had noted that even though the manufacturing operations at GAF had ceased before December 31, 1983, their warehouses continued to store hazardous materials after this date. It was also noted that the Standard Industrial Classification (SIC) number 2661 assigned to the manufacturing activity also applied to the storage of the manufactured product, thus subjecting the warehouses to ECRA's remedial and regulatory provisions.

SITE OPERATIONS OF CONCERN

Manufacturing operations conducted at the facility included the use of paper, wood chips and sawdust to make felt paper for roofing, flooring and vinyl siding. The felt paper was manufactured, then shipped off site for saturation and binding to make various end products. In addition, GAF produced asbestos pipe coverings from the 1950s until the late 1960s. Approximately 12 to 15 percent of the asbestos produced was discarded as solid waste. It is believed that asbestos production was conducted at the area of the site currently owned by Vanguard Vinyl Siding, Inc.

The manufacturing facility consisted of three paper machines and associated stock preparation equipment for manufacturing both roofing and flooring grades of felt. Ingredients used in this process included defibered wood and mixed papers (office waste paper, waste corrugated and kraft corrugated). In addition, wood flour was occasionally used as a supplement. Approximately 50 percent of the wood used was oak, the other 50 percent was pine. Raw stock was processed through sizing screens, reducing the wood chips to a fibrous form. This material was then transferred to a storage chest for further refining, screening and final blending. The paper stock portion of the system involved a mixture of 50 percent mixed papers and 50 percent corrugated as a blend. Contaminants (cellophane, plastics, aluminum, etc.) removed during this process were packed in waste disposal boxes and removed to the on-site landfill.

As part of the manufacturing process, water was withdrawn from the Delaware River, processed through the power plant and supplied as makeup to the processing operations. The manufacturing plant contained a closed process water system which prevented any wastewater discharges. The makeup water required amounted to the portion of water lost to evaporation during the drying process (approximately 92,000 gallons per day). Tannins generated as a result of the steam cooking process required neutralization; liquid sodium hydroxide was an additive to the overall water treatment process to maintain a near neutral pH. Typical water treating chemicals were used to control hardness. In addition, a polymeric material of the polyamide family was utilized in the process to help coagulate fines and properly introduce them to the finished products during the felt forming stage.

Steam used for drying the paper was obtained from either of two 100,000-pound Badenhousen boilers. Boiler blowdown was discharged to the local municipal sewage treatment plant.

Wastes from the plant consisted predominantly of cellophane, plastics, aluminum, cans, glass and bark. A portion of the site (Area C) was used as a fill area to dispose of metal, glass, plastic and other impurities removed from the process stream during the initial steps of the felt manufacturing process. Additionally, other plant debris including scrap finished products which contained bound asbestos, was periodically disposed of in the fill area.

GAF initially submitted a Notification of Hazardous Waste Activity Form to the United States Environmental Protection Agency (USEPA) on August 12, 1980. The notification was for the treatment/storage/disposal of waste classified as hazardous. On November 19, 1980 GAF submitted an incomplete Resource Conservation Recovery Act (RCRA) Part A permit application to the

USEPA. Subsequently, on July 10, 1981 GAF requested that further processing of its permit application be discontinued due to the fact that GAF did not generate, treat, store or dispose of any waste classified as hazardous in excess of the small quantity generator exclusion limit.

The NJDEP/Division of Hazardous Waste Management/Bureau of Hazardous Waste Engineering (DHWM/BHWE) and the Division of Hazardous Waste Management/Southern Bureau of Field Operations (DHWM/SBFO) conducted an inspection on January 9, 1990 at the GAF site. At that time it was determined that GAF did not treat, store or dispose of hazardous waste. This facility was later delisted from treatment, storage and disposal status.

Two areas of the site were used by contractors from approximately May 1988 until March 1990, during the construction of the Gloucester City Sewage Pump Station by the Camden County Municipal Utilities Authority. Lisbon Contractors, Inc. of Danboro, Pennsylvania stored equipment and materials on a portion of GAF's property at the corner of 6th and Water Street. The pump station was constructed on the lot immediately north of the Gloucester City Plant, directly across the street from the power house (Building 11).

Carbro Construction Corporation of Bridgewater, New Jersey used a portion of the GAF property, on the corner of Charles and Water Streets, as a field construction office. Carbro Construction was involved in the installation of underground sewer pipes for the Gloucester City Sewage Pump Station.

A spill of approximately 300 to 400 gallons of Askarel (polychlorinated biphenyls, PCBs), occurred at the power house area of the GAF site (Area D) on April 14, 1978. PCB-contaminated soils and liquids were excavated and manifested off site to Chemtrol Pollution Service of Model City, New York.

On May 27, 1979 approximately 300 gallons of No.6 fuel oil escaped from a heat exchanger blowdown when a fuel line inside the exchanger broke. The oil mixed with the water and discharged onto the ground covering an area approximately 100 feet by 10 feet. Oil and soil were excavated from this area and manifested off site to Kinsley Landfill of Deptford, New Jersey.

Approximately 2,000 gallons of water spilled from the top of a process water tank at GAF on June 22, 1983. The spill was the result of an adjustment being made to a pump impeller, followed by a trip out of a standby pump. The spill was soaked up with corrugated pulp and returned to the process tank by a front end loader. Some of the spilled water was reported as reaching the storm sewer catch basin at the curb.

Various hazardous waste liquids, solids and corrosive materials were removed from the facility between 1985 and 1986 by Clean Venture and S.J. Transportation Company. A site investigation by the NJDEP/DHWM/SBFO on April 27, 1987 determined that no visible contamination or storage of wastes was found on site.

A Preliminary Assessment of the site conducted by the NJDEP/Division of

Hazardous Waste Management/Bureau of Planning and Assessment (DHWM/BPA) reported that former employees of GAF stated that an area behind the facility and between the Delaware River was used as a dump site for asbestos waste from the plant. Dumping in this area apparently began with the Ruberoid Corporation and continued until approximately 1971. In addition, a portion of the asbestos on site was removed off site and used as clean fill in areas of Gloucester City. Currently GAF is cooperating with the NJDEP/Division of Responsible Party Site Remediation/Bureau of State Case Management (DRPSR/BSCM) to remediate several properties in Gloucester City/Gloucester Heights which contain asbestos material believed to have originated from the GAF site.

Three underground storage tanks existed at the site; Tank No. A1 was a 10,000-gallon kerosene tank, which was last used in 1972. Tank No. A2 was a 1,000-gallon leaded gasoline tank which was last used in 1985. These tanks were abandoned and filled with gravel on December 15, 1988. The abandonment procedure entailed exposing the upper surface of the tank, ventilating the tank and testing for combustible fumes. The top of each tank was subsequently burned out and completely filled with gravel. In addition, the area above the tanks was filled with gravel and brought up to grade. Joric Inc. of Gloucester, New Jersey performed this abandonment procedure. It was noted that the tanks did not contain any liquids and exhibited negligible beads of condensation on the inner surface, which evaporated during the burning process.

Tank No. A3 was a 550-gallon No. 2 fuel oil tank which sat in a depression in the ground. This tank had been last used in 1979. In December 1988 this tank was decommissioned and moved to a new location at the site. The revised sampling plan proposal prepared by Environmental Science and Engineering Inc., of Plymouth Meeting, Pennsylvania, submitted in January 1991, stated that soil sampling would occur at these areas in the future.

Numerous aboveground tanks were located at the site. A 400,000-gallon aboveground tank containing No. 6 fuel oil and two 8,000-gallon aboveground No. 6 fuel oil tanks were listed on the Site Evaluation Submission for GAF. Two aboveground process water tanks (one 125,000 gallons, the other 100,000 gallons) were also listed. In addition, a 20,000-gallon aboveground tank containing caustic was installed at the site in 1970. All aboveground tanks are still currently on site.

On October 1, 1991 a magnetometer survey was conducted by Langan Environmental Services, Inc. (LESI) of Elmwood Park, New Jersey in Area C to identify any areas which may contain anomalies. Five test pits were excavated to the bottom of the fill material and a soil sample was collected at each area. Elevated levels of copper, zinc and nickel were detected at several of the test pits. Asbestos levels in the soils in the fill area ranged from 10 to 15 percent.

The magnetometer survey determined that wide areas of the site exhibited anomalous readings ranging from $\pm 1{,}000$ gammas to $\pm 1{,}500$ gammas. It was thought that surficial metal debris and metal debris located 6 to 12 inches below the surface may have been the cause of the readings. LESI stated that a tank or drum approximately 1 to 2 meters below the ground surface would exhibit anomalous readings of $\pm 10{,}000$ to $\pm 30{,}000$ gammas.

The highest reading recorded was ±6,000 gammas, which was detected at three locations. Test pits 2A and 1A were dug at two areas exhibiting this reading. The third anomaly was identified as a stainless steel "segment" found at the surface on October 2, 1991. During the excavation of test pit 2A a metal plate approximately 1-inch thick and 4 feet by 8 feet was discovered. The excavation at test pit 1A did not reveal any source for the anomalous reading. After excavation the pit no longer exhibited these readings.

Test pit 3A was excavated at a large area which exhibited anomalous readings of ±2,000 to ±4,000 gammas. Approximately 12 inches below the surface a 6- to 12-inch layer of metal, glass and soil was discovered.

Test pit 4A was excavated in an area where an anomaly of +3,000 gammas was recorded. The upper 12 to 18 inches of this area contained fill material including metal debris.

The PCB transformer area is known as Area D. Additional transformers are located at other areas of the site. During a June 14, 1990 site inspection by the NJDEP/Division of Hazardous Waste Management/Bureau of Environmental Evaluation and Cleanup Responsibility Assessment (DHWM/BEECRA) two additional batteries of transformers were observed east of Building 21 and inside the south end of Buildings 2 and 4, respectively.

On September 20, 1991 Resource Management, Inc. of Media, Pennsylvania collected suspect asbestos samples from the GAF facility. Analysis of the samples was performed by Environmental Hazards Services, Inc. of Philadelphia, Pennsylvania. Six of the samples collected at Building 11 exhibited asbestos containing materials composed of chrysotile, some of which also contained amosite or crocidolite. Samples collected at Building 1 contained asbestos containing material composed of amosite and chrysotile. Samples collected at Buildings 2, 4, 5, 6, 8 and 16 exhibited asbestos containing material composed of chrysotile.

GROUNDWATER ROUTE

GAF is located in the Atlantic Coastal Plain Physiographic Region. Underlying this area are unconsolidated sediments of Quaternary, Tertiary and Cretaceous age consisting of alternating layers of sands, silts and clays. The sediments are approximately 250 feet thick at the facility site and thicken eastward toward the Atlantic Ocean. The underlying bedrock material is Cambrian to Pre-Cambrian in age and is called the Wissahickon Schist. In Camden County the Potomac-Raritan-Magothy aquifer system is the most productive source of groundwater. This system consists of aquifers composed of sand and some gravel and confining units composed of silts and clays, and is overlain in the outcrop area by highly permeable Pleistocene sand and gravel. The sands are divided into three hydrologic units, an upper, middle and lower aquifer. The Magothy Formation comprises the upper unit; the middle and lower units are composed of sands of the Raritan Formation and the Potomac Group.

The Magothy and Raritan Formations consist of alternating beds of sand, gravel and clay. The Raritan Formation is predominantly light colored; the Magothy beds include some darker lignitic and glauconitic material. The maximum thickness of the formations in the Camden area is approximately 240 feet. In the vicinity of the GAF facility, two water bearing zones have been identified in the Magothy and Raritan Formations. The zones are

separated hydraulically by clay beds. Local and regional groundwater flow within the aquifer of concern is northwest toward the Delaware River.

Four monitoring wells were installed on site on September 26, 1991 by Environmental Drilling Inc. of West Creek, New Jersey.

WELL #	DEPTH (feet)	DEPTH OF WATER (feet)	LOCATIONS
MW1	21.48	6.84	Located at Area C, east of Water Street, east of Test Pit 3.
MW2	21.5	8.44	Located at Area C, east of Water Street at the southeast corner.
MW3	21.5	8.28	Located at Area C, east of Water Street, east of the Water Street Warehouse, west of Test Pit 4.
MW4	36.18	26.1	Located at Area B, adjacent to the decommissioned kerosene and gasoline underground storage tanks.

MW1, MW2 and MW3 were installed in Area C to determine if groundwater had been impacted by former disposal practices. MW4 was installed in Area B, adjacent to the decommissioned kerosene and gasoline underground storage tanks. MW1, MW2 and MW3 are screened in the surficial water table aquifer; MW4 does not intersect this water table, nor the tidal marsh deposits.

Groundwater sampling was conducted on October 15, 1991 by Langan Environmental Services, Inc. (LESI) of Elmwood Park, New Jersey. All samples collected for metal analyses were filtered in the field prior to analyses. No volatile organic or semivolatile organic compounds were detected above the method detection limits. In addition, no polychlorinated biphenyls (PCBs), phenol or lead was detected in any samples. Antimony was detected in MW2; arsenic, chromium, copper and zinc were detected in some of the samples, but no levels exceeded the NJDEPE action levels.

A second round of groundwater sampling occurred on November 18, 1991. Results of this sampling episode were not found in the files reviewed. LESI proposes to seal the four wells using a certified well driller if the results of the second round of sampling do not indicate contaminants above NJDEPE action levels.

Gloucester City Water Department operates four wells approximately 0.83 mile from the site. Depths of the wells range from 260 feet to 306 feet, all wells tap the Raritan/Magothy Aquifer. Approximately 12,500 residents are serviced in Gloucester City by this system.

Brooklawn Water Department operates three wells approximately 0.76 mile from the site. Depths of the wells range from 293 feet to 327 feet; all tap the Raritan/Magothy Aquifer. Approximately 2,520 residents in Brooklawn are serviced by this system.

National Park Water Department operates two wells approximately 3.3 miles from the site. One well is 282 feet deep, the other is 275 feet deep; both wells tap the Raritan/Magothy Aquifer. Approximately 3,550 residents in the Borough of National Park are serviced by this system.

New Jersey American Water Company operates eight wells within a 3 to 4 mile radius of the site. Two additional wells are located approximately 2.8 miles from the site. All wells tap the Raritan/Magothy Aquifer and range in depth from 190 feet to 598 feet. Approximately 33,490 residents are serviced by this system in sections of Haddon Heights and Runnemede.

Collingswood Water Department operates six wells within a 3 to 4 mile radius of the site. A seventh well is located approximately 2.4 miles from the site. The seven wells range in depth from 281 feet to 318 feet and all tap the Raritan/Magothy Aquifer. Collingswood Water Department services approximately 20,000 residents in Collingswood, a section of Woodlyn and a section of Haddon Township.

Bellmawr Water Department operates two wells approximately 1.45 miles from the site. Average depth of the wells is 373 feet. Two additional wells are located approximately 2.45 miles from the site; average depth of the wells is 560 feet. All wells tap the Raritan/Magothy Aquifer. Approximately 9,520 residents are served by this water system, about half of Bellmawr Boro.

Camden City Water Department operates three wells which service the Parkside Treatment Plant. The wells are approximately 3.3 miles from the site and range in depth from 230 feet to 290 feet. All three wells tap the Raritan/Magothy Aquifer; approximately 20,000 residents are serviced in the Camden City Area.

West Deptford Water Department operates one well 2.5 miles from the site. A second well is 3.3 miles from the site. The wells are approximately 365 feet deep and tap the Raritan/Magothy Aquifer. The two wells are part of an interconnected water system which is comprised of a total of seven wells. Approximately 19,000 residents are serviced by this system and approximately 64 residents are served by private wells in West Deptford Township. In addition, approximately four industries in the area are serviced by private wells.

Westville Water Department operates three wells approximately 1.2 miles from the site. Depths of the wells range from 274 feet to 317 feet; all wells tap the Raritan/Magothy Aquifer. Approximately 7,000 residents are serviced in Westville and portions of Deptford and West Deptford.

Deptford Township Municipal Utilities Authority operates one well approximately 2.5 miles from the site. It is 363 feet deep and taps the Raritan/Magothy Aquifer. Approximately 1,100 residents are serviced in a section of Deptford Township.

Woodbury Water Department operates two wells within a 3 to 4 mile radius of the site. One well is 188 feet deep, the other is 305 feet deep; both tap the Raritan/Magothy Aquifer. The wells are part of an interconnected system (with a total of five wells) which services approximately 11,920 residents in Woodbury, West Deptford, Deptford, Wenonah and Woodbury Heights.

Haddon Township Water Department operates four wells within a 3 to 4 mile radius of the site. The wells range in depth from 448 to 487 feet in depth and all tap the Raritan/Magothy Aquifer. Approximately 12,000 residents are serviced by this system in Haddon Township.

The first groundwater sampling episode at the site did not reveal any contaminants present above the NJDEPE action levels at Area C (the fill area) or at Area B (the location of the abandoned underground storage tanks). Shallow groundwater flow in the tidal deposits at the site was determined to be predominantly to the north/northwest, toward the Delaware River. Groundwater flow in the lower water bearing unit (by MW4) could not be determined. PCB-contaminated soil was detected on site, possible groundwater contamination may have occurred from this source. Monitoring wells on site are located south of the past PCB spill.

SURFACE WATER ROUTE

GAF is located adjacent to the Delaware River to the west; runoff from the site would flow into the Delaware River which flows south from the site. The Delaware River from river mile 108.4, to below the mouth of Big Timber Creek is classified as Zone 3. Designated uses in Zone 3 include agricultural, industrial and public water supply after reasonable treatment; wildlife; maintenance of resident fish and other aquatic biota; migration of anadromous fish; secondary contact recreation; and navigation.

GAF was issued a renewal of their New Jersey Pollutant Discharge Elimination System/Discharge to Surface Water (NJPDES/DSW) permit (No. NJ0005371) by the NJDEP/Division of Water Resources/Bureau of Water Quality Management (DWR/BWQM) on March 19, 1985 to discharge non-contact cooling water to the Delaware River. This permit was due to expire on April 30, 1990. On October 6, 1986 GAF filed an affidavit of exemption to terminate the above permit, due to the closure of the facility.

The Delaware River is tidal at the site, numerous industrial intakes are located between river mile 106 and river mile 97 in New Jersey. The City of Philadelphia operates one drinking water intake on the Delaware River at Torresdale, Pennsylvania. This intake is approximately 14.7 miles upstream from the site.

Two coastal wetlands (tidal flats) are located downstream of the site. One area is approximately 80 acres in size and is approximately 0.63 mile from the site. The second area is approximately 1.5 miles downstream from the site.

Previous practices at the site are alleged to have included the dumping of asbestos waste at an area of the site behind the facility between the Delaware River. The possibility for surface water contamination exists if this waste was not contained.

Approximately 7.4 miles upstream from the site is habitat known to be utilized by a New Jersey state endangered or threatened specie. Twelve threatened or endangered species in New Jersey utilize habitats such as those found in the USGS Philadelphia, Woodbury, Runnemede and Camden Quadrangles. They include the shortnose sturgeon (Acipenser brevirostrum), American shad (Alosa sapidissima), pine barrens treefrog (Hyla andersonii), brook trout (Salvelinus fontinalis), northern pine snake (Pituophis melanoleucus), bog turtle (Clemmys muhlenbergii), wood turtle (Clemmys insculpta), peregrine falcon (Falco peregrinus), red-shouldered hawk (Buteo lineatus), black rail (Laterallus jamaicensis), upland sandpiper (Batramia longicauda) and Henslow's sparrow (Ammodramus henslowii).

AIR ROUTE

GAF (Plant ID Nos. 50002 and 50127) possessed numerous Air Pollution Certificates with the NJDEP/Department of Environmental Quality (DEQ) regarding stacks located at various areas on site. Air contaminants noted as being emitted from the stacks included sulfur dioxide, nitrogen oxides, particulates, carbon monoxide and hydrocarbons.

On July 2, 1971 the NJDEP/DEQ conducted an investigation concerning possible releases to the atmosphere by Gulf and Western Industries, Kewanee Oil Company and GAF, as reported by area residents. Approximately 23 residents were interviewed on this date. Complaints ranged from rotten egg odors to gas odors, chemical odors and smoke and dust emissions. All of the complainants named the three subject companies as the source, along with possible odors from Philadelphia.

The NJDEP/DEQ issued an Order on September 29, 1971 to GAF to discontinue the discharge of solid particles into the atmosphere from stacks or chimneys. This violation had occurred on July 22, 1971 at the facility.

GAF was issued a Notice of Prosecution (NOP) from the NJDEP/DEQ on April 6, 1972 for issuing smoke greater than number 1 Ringlemann, for a period of 9.75 minutes out of a 30 minute observation period. GAF was fined $100.00 for this violation.

A complaint was registered with the NJDEP/DEQ against GAF on October 3, 1975 by the Brooklawn Police Department. It was noted that on weekends GAF blew black smoke over the town of Brooklawn. The police department received numerous calls regarding these releases. An investigation of this complaint by the NJDEP/DEQ on October 25, 1975 could not confirm this occurrence.

A NOP was issued on May 7, 1979 to GAF by the NJDEP/DEQ regarding an opacity violation which had occurred on February 22, 1979. GAF was fined $100.00 for this violation.

A complaint was verified by the NJDEP/DEQ against GAF on June 13, 1983 regarding a black rancid liquid, located on the ground around the waste disposal dump trucks on site. This matter was referred to the NJDEP/Division of Waste Management.

GAF ceased operating at the site in December 1983. The possibility for air contamination at the site may exist if asbestos dumped at the site was not containerized or covered correctly. An unidentifiable white substance was noted on the surface at the fill area during the March 20, 1992

Pre-Sampling Assessment conducted by the NJDEPE/Division of Responsible Party Site Remediation/Bureau of Site Assessment (DRPSR/BSA). Possible air contamination may exist at this area of the site if this substance proves to be asbestos waste.

SOIL

Soil at the site is classified as Downer-Woodstown-Dragston series which includes gently sloping, grayish-brown sandy soils. The Downer series consists of dark grayish-brown, well-drained soils that have a yellowish-brown subsoil containing only slightly more clay than the surface layer. These soils are nearly level to gently sloping. Soils of the Downer-Woodstown-Dragston Series are rapidly permeable to moderately permeable.

A description of the soil and the fill material at the site was obtained during the drilling of soil borings, monitoring wells and test pit excavations completed September 26 and October 2, 1991. Material noted included imported fill, tidal marsh deposits and non-marine, recent Quaternary deposits.

Material comprising the artificial fill extends to depths of 3 feet to greater than 6 feet below the existing grade. Different areas of the site exhibited varying amounts and type of fill material. The areas surrounding the former power house consists of coal fragments and powder, and gravel with low to moderate amounts of soil. Underlying this area is soil fill consisting of red-brown, fine to coarse sand and gravel.

The fill area (Area C) consists of fill material containing a 6-inch to 12-inch layer of miscellaneous debris intermingled within a soil of high organic content. Underlying this material are one or more fill layers: a black silt to fine sand material, a red-brown soil which contains high volume percentages of glass and metal, a layer of wood and burnt wood material with low to moderate amounts of silt-fine sand and a layer of white material. Varying amounts of fill material consisting of wood, metal, bricks and plastics are located between the above mentioned layers. The underlying native soil in this area consists of fine to coarse sands with silt and gravel.

Native tidal marsh deposits, which consist of clay-silt to silty sand, were noted below the fill material in areas where the overlying unit was penetrated. These deposits extend to depths of at least 20 feet below grade with local thicknesses of approximately 15 feet. Also noted in this unit were occasional fine sand and fine gravel lenses. Tidal deposits varied in color from gray to brown, indicative of the amount of organic material present.

The Quaternary deposits consist of soil composed of varying amounts of fine sand and gravel. This soil type was encountered throughout the boring for MW4 and in several borings in Area C at a depth of approximately 20 to 22 feet below grade (below the tidal marsh deposits). The color of this unit varies from light brown to off-white. The thickness and the lateral extent of this unit could not be determined from the available soil boring data, though it was believed to be a riverbank deposit.

On November 18, 1985 BCM Eastern Inc. of Plymouth Meeting, Pennsylvania collected soil borings at two areas of the site where potential PCB

contamination was suspected. BCM Eastern Inc. collected a total of 19 soil samples at these locations. Samples were analyzed for polychlorinated biphenyls (PCBs) to determine if previous remedial efforts addressing a PCB spill at the site in 1978 were appropriate for current NJDEP cleanup guidelines. Sample results revealed that PCB contamination existed at Area G; levels ranged from 7.6 parts per million (ppm) to 183 ppm. At Area H one sample contained PCB levels of 6.4 ppm. It was recommended at that time that future remedial work should involve the excavation of 6 inches of soil at this area of the site. Subsequently, contaminated soils and liquids were diposed off site at CECOS International of Niagara Falls, New York and Chem Waste Management of Emelle, Alabama in 1985.

Langan Environmental Services, Inc. (LESI) of Elmwood Park, New Jersey conducted a sampling episode at the site from September 30, 1991 through October 2, 1991. Twenty-four soil samples were collected at Area A (the aboveground storage tank area), Area B (the underground storage tank area) and Area C (the fill area) on September 30, 1991. Elevated levels of petroleum hydrocarbons (PHCs) were detected in three samples at Area A ranging from 11,000 ppm to 38,200 ppm. Carcinogenic base/neutral compounds were detected in one sample within the tank dike area at 19,100 ppm.

On October 1, 1991 fourteen soil samples were collected from Area D (the transformer area) and miscellaneous areas (the french drain and the pier/pipeline) at the site. PHCs were not detected in any sample above NJDEPE action levels. One sample at Area D contained 7,600 ppb Aroclor-1260.

Eight wipe samples and eleven soil samples were collected on October 2, 1991. Samples were collected at the concrete trench, the french drain and Area C. The wipe samples were collected from concrete surfaces adjacent to the existing transformer. Soil samples were analyzed for PHCs and base/ neutral compounds; the wipe samples were analyzed for PCBs. Soil and wipe samples collected from the PCB transformer area contained PHCs below the NJDEPE action level. PCB concentrations at the old spill area were detected above the NJDEPE action level of 5 ppm in one sample, HA-2 at 7.6 ppm. PHCs were detected at the existing transformer area below the NJDEPE action level. PCBs were not detected above NJDEPE action levels at the existing transformer area or in any of the wipe samples.

Soil samples collected from the fill area were analyzed for volatile and semivolatile organic compounds, priority pollutant metals plus 40, PCBs and asbestos. Five test pits (TP-1A through TP-5A) were excavated at Area C (the fill area) to the bottom of the fill material. Total volatile organic compounds in the soils collected from the test pits ranged from none detected (ND) to 14 ppb. Total semivolatile organic compounds ranged from ND to 5,050 ppb, below the NJDEPE action level.

Eleven metals were detected in the test pit samples. Antimony ranged from ND to 45.9 ppm at TP-5A; arsenic levels were not detected above the NJDEPE action level of 20 ppm. Cadmium levels ranged from ND to 3.44 ppm at TP-3A, above the NJDEPE action level of 3 ppm.

Chromium was detected at all of the sampling locations at concentrations ranging from 9.98 ppm at TP-1A to 30.1 ppm at TP-4A; the NJDEPE action level for chromium was not exceeded at any of the sampling locations. Copper was detected at all of the sampling locations with concentrations ranging from 31.8 ppm at TP-4A to 918 ppm at TP-3A. The NJDEPE action

level for copper was exceeded at TP-2A and TP-3A. Lead was detected at all of the sampling locations, ranging from 9.03 ppm to 823 ppm. Mercury concentrations ranged from ND to 3.43 ppm at TP-3A. Nickel was detected at all sampling locations ranging from 19.7 ppm at TP-1A to 102 ppm at TP-4A. Zinc was detected at all of the sampling locations with concentrations ranging from 133 ppm at TP-1A to 1,240 ppm at TP-3A. NJDEPE action levels for zinc were exceeded at TP-2A, TP-3A and TP-5A. Beryllium was only detected at TP-1A and only slightly above the NJDEPE action level of 1 ppm. Selenium concentrations ranged from ND to 4.69 ppm at TP-1A. PCBs were detected at location TP-2A at a concentration below the NJDEPE action level.

Asbestos levels in the soils in the fill area ranged from 10 to 15 percent and was composed mainly of amosite and chrysotile.

DIRECT CONTACT

The area of the site west of Water Street is enclosed by a fence, as is the portion of the site which is located on the east side of Water Street. Access to the site by the off-site population does not appear to be a matter of concern. A caretaker is also located at the site.

FIRE AND EXPLOSION

A documented fire occurred at the GAF facility on April 16, 1981. This was noted as being a one alarm fire, involving wood and paper products. GAF ceased operating in 1983; all hazardous materials were manifested off site between 1985 and 1986. No record of flammable or explosive materials were noted at the site during a site inspection by the NJDEP/DHWM/BHWE and the SBFO on January 9, 1990.

ADDITIONAL CONSIDERATIONS

No damage to flora or fauna has been noted on site. Several areas in Gloucester City/Gloucester Heights had received asbestos contaminated material from the GAF facility, which had been used as clean fill. Currently, several residences are undergoing remedial activities regarding this material.

ENFORCEMENT ACTIONS

A NOV was issued to GAF, for notification purposes only, on July 28, 1987 by the NJDEP/DHWM/SBFO for discharging a hazardous substance. Of concern was a release of asbestos material due to improper disposal and failure to notify the Department of said release. The Stein residence and adjacent properties were noted as areas containing a dry fibrous asbestos material. Two types of asbestos material were detected at the Stein property, chrysotile and amosite.

On August 19, 1986 GAF was issued a letter of violation from the NJDEP/Division of Water Resources for nonsubmittal of a Discharge Monitoring Report.

SUMMARY OF SAMPLING DATA

1. Sampling date: November 18, 1985

   Sampled by: BCM Eastern Inc.
   Plymouth Meeting, Pennsylvania

Samples: 19 soil samples

Laboratory: BCM Eastern Inc.
Norristown, Pennsylvania
Lab Certification #77175

Parameters: Polychlorinated biphenyls (PCBs)

Sample description: Soil borings were conducted at two areas of the site. Hand augers were used to collect samples at a maximum depth of 4 feet.

Contaminants detected:

SAMPLE AREA AND DEPTH (inches)	SAMPLE NO.	PCB CONCENTRATION (ppm)
G-1 2-4"	520597	103
22-24"	520598	0.9
46-48"	520599	3.1
G-2 2-4"	520600	81
22-24"	520601	2.9
46-48"	520602	2.9
G-3 2-4"	520603	130
22-24"	520604	1.8
46-48"	520605	0.3
G-4 2-4"	520606	42
22-24"	520607	2.1
46-48"	520608	<0.1
G-5 2-4"	520609	183
22-24"	520610	7.6
46-48"	520611	1.1
H-1 2-4"	520612	6.4
22-24"	520613	0.7
H-2 2-4"	520614	0.1
22-24"	520615	<0.1

No sample was collected at areas H-1 and H-2 at a depth of 46-48 inches.

QA/QC: No QA/QC data was noted in the files reviewed.

File location: Attachment S
NJDEP/Bureau of Environmental Evaluation
Cleanup and Responsibility Assessment
Trenton, New Jersey

2. Sampling date: September 30, 1991

Sampled by: Langan Environmental Services, Inc.
Elmwood Park, New Jersey

	Samples:	24 soil samples
	Laboratory:	Bridgeport Environmental Inc. Bridgeport, New Jersey Lab Certification #08555
	Parameters:	Samples collected from Area A and Area C were analyzed for total petroleum hydrocarbons (PHCs) and base/neutral compounds + 15. Samples collected from Area B were analyzed for volatile organic compounds + 15 (VOs + 15). Samples collected from the area of the former 10,000-gallon kerosene UST were analyzed for VOs + 15 and naphthalene and PHCs.
	Sample description:	Samples from Area A were collected from 0 to 6 inches. Samples from Area B were collected from depths of 5 to 5.5 feet to 10 to 10.5 feet.
	Contaminants detected:	Sample No. 122/S-11 collected at the tank dike area contained 38,200 ppm PHCs. Sample Nos. 114/S-3 and 118/S-7, collected from the area of the two 8,000-gallon aboveground storage tanks contained 15,300 ppm and 11,000 ppm PHCs, respectively. In addition, carcinogenic base/neutral compounds were detected in Sample No. 123/S-12 at 19,100 ppm.
	QA/QC:	All QA/QC was submitted to the NJDEP.
	File location:	Attachment Y NJDEPE/DRPSR/BEECRA Trenton, New Jersey
3.	Sampling date:	October 1, 1991
	Sampled by:	Langan Environmental Services, Inc. Elmwood Park, New Jersey
	Samples:	14 soil samples
	Laboratory:	Bridgeport Environmental Inc. Bridgeport, New Jersey Lab Certification #08555
	Parameters:	Samples collected from Area D were analyzed for PCBs and PHCs. Samples collected from the pier/pipeline area and a sample from the french drain were analyzed for BN + 15 and PHCs.
	Sample description:	Samples from Area D were collected from 0 to 6 inches to 30 to 36 inches. Samples from

the pier/pipeline area were collected 0 to 6 inches or 30 to 36 inches. The sample from the french drain was collected from a depth of 30 to 36 inches.

Contaminants detected: PHCs were not detected above the NJDEPE action level. Sample No. HA-2 contained 7,600 ppb of Aroclor-1260.

QA/QC: All QA/QC data has been submitted to the NJDEPE.

File location: Attachment Y
NJDEPE/DRPSR/BEECRA
Trenton, New Jersey

4. Sampling date: October 2, 1991

Sampled by: Langan Environmental Services, Inc.
Elmwood Park, New Jersey

Samples: 8 wipe samples and 10 soil samples

Laboratory: Bridgeport Environmental Inc.
Bridgeport, New Jersey
Lab Certification #08555

Parameter: Samples collected from the concrete trench and french drain were analyzed for BN + 15 and PHCs. The wipe samples were analyzed for PCBs. Samples collected at Area C at the test pits were analyzed for priority pollutant compounds (minus pesticides, but including PCBs) and asbestos.

Sample description: The soil samples were collected from depths of 30 to 36 inches and 36 to 42 inches. The eight wipe samples were collected from concrete surfaces adjacent to the existing transformer.

Contaminants detected: Cyanide was detected at several of the test pit locations, but at concentrations below NJDEPE action levels. Asbestos in the soils in the fill area ranged from 10 to 15 percent and was mainly comprised of amosite and chrysotile. PCBs were not detected in any of the wipe samples above NJDEPE action levels. Contaminants detected at the test pits and former PCB spill area are listed below:

AREA	SAMPLE NO./LOCATION	CONTAMINANT	CONCENTRATION
Test pit 1A	TP-1A	beryllium	1.13 ppm
		selenium	4.69 ppm

AREA	SAMPLE NO./LOCATION	CONTAMINANT	CONCENTRATION
Test pit 2A	TP-2A	copper	214 ppm
		zinc	353 ppm
Test pit 3A	TP-3A	cadmium	3.44 ppm
		copper	918 ppm
		mercury	3.43 ppm
		zinc	1,240 ppm
		lead	823 ppm
Test pit 4A	TP-4A	nickel	102 ppm
Test pit 5A	TP-5A	antimony	45.9 ppm
		zinc	490 ppm
		lead	259 ppm
Concrete Trench	145/TP-3	PHC	57 ppm
Concrete Trench	146/TP-4	PHC	ND
French Drain	143/TP-1	PHC	ND
French Drain	144/TP-2	PHC	55.3 ppm
French Drain	140/HA-7	PHC	86 ppm

ND = Not detected

QA/QC: All QA/QC was submitted to the NJDEPE.

File location: Attachment Y
NJDEPE/DRPSR/BEECRA
Trenton, New Jersey

5. Sampling date: October 15, 1991

Sampled by: Langan Environmental Services, Inc.
Elmwood Park, New Jersey

Samples: 4 groundwater samples

Laboratory: Bridgeport Environmental Inc.
Bridgeport, New Jersey
Lab Certification #08555

Parameters: MW1 through MW3 were analyzed for priority pollutant compounds + 40 (minus pesticides but including PCBs), total dissolved solids and pH. MW4 was analyzed for volatile organics + 15, base/neutrals + 15, methyl tertiary butyl ether, tertiary butyl alcohol, total dissolved solids and pH.

Sample description: Samples were collected at the four monitoring wells. All samples collected for

metal analyses were filtered in the field according to NJDEPE guidelines.

Contaminants detected: No volatile organic or semivolatile organic compounds were detected above the method detection limit; no polychlorinated biphenyls (PCBs), phenol or lead were detected in any samples. Cyanide was detected in MW1 and MW2, but below the NJDEPE action level. Total dissolved solid concentrations ranged from 75 mg/l at MW2 to 445 mg/l at MW3. The pH values ranged from 6.5 at MW1 to 6.8 at MW3. Metals detected did not exceed NJDEPE action levels.

QA/QC: All QA/QC data was submitted to the NJDEPE.

File location: Attachment Y
NJDEPE/DRPSR/BEECRA
Trenton, New Jersey

RECOMMENDATIONS

On January 6, 1992 the Superior Court of New Jersey, Appellate Division affirmed the determination of the New Jersey Department of Environmental Protection and Energy concerning GAF's cleanup responsibilities under the Environmental Cleanup Responsibility Act (ECRA). It was concluded that ECRA was triggered by GAF's cessation of its warehousing activities for a period of more than two years. Due to the fact that GAF is currently undergoing remedial activities under the direction of the Bureau of Environmental Evaluation Cleanup Responsibility Assessment (BEECRA), no further action under CERCLA is recommended at this time.

Submitted by:

Eileen Stewart
Hazardous Site Mitigation
Specialist Trainee
Bureau of Field Operations
March 23, 1992

ATTACHMENT B

HANNOCH WEISMAN
A PROFESSIONAL CORPORATION
COUNSELLORS AT LAW
4 BECKER FARM ROAD
ROSELAND, NEW JERSEY 07068-3788
(201) 535-5300
FACSIMILE
(201) 994-7198
N. Y. TELEPHONE
(212) 732-3268

PLEASE REPLY TO:
P.O. BOX 1040
NEWARK, NJ 07101-9819

WRITER'S DIRECT LINE:
201-535-5362

FILE #
11192-00894E

August 10, 1995

VIA AIRBORNE EXPRESS

Mr. Stephen Myers
Case Manager
New Jersey Department of
Environmental Protection
Industrial Site Evaluation Element
401 East State Street, Fifth Floor
CN 020
Trenton, New Jersey 08625

Re: GAF Building Materials Corporation
Gloucester City Site (the "Site")
ISRA Case No. 90263

Dear Mr. Myers:

As you requested, I enclose a time-stamped copy of the Declaration of Environmental Restrictions for the Site recorded on August 7, 1995 in the Register of Deeds and Mortgages for Camden County.

Should you require any additional information, please let me know.

Very truly yours,

HANNOCH WEISMAN
A Professional Corporation

By Ritaelena M. Casavechia
Ritaelena M. Casavechia

RMC:kpr
Enclosure

SUSAN R. ROSE
REGISTER OF DEEDS
AND HOR

DECLARATION OF ENVIRONMENTAL RESTRICTIONS

AUG 7 12 58 PM '95

Prepared by:

Signature

Celeste Lagomarsino
Print Name

This Declaration of Environmental Restrictions (the "Declaration"), made as of the first day of August, 1995, by GAF Building Materials Corporation, Charles and Water Streets, Gloucester City, New Jersey ("Current Owner").

W I T N E S S E T H:

WHEREAS, Curren wner is the current owner in fee simple of certain real p y designated as Lot 14.01, Block 116.01 (the portion of the property encompassing "Area C" as defined below) and Lot 1, Block 111 (the portion of the property encompassing "Area D" as defined below) on the tax map of the City of Gloucester City, Camden County, New Jersey more particularly described on Exhibit A attached hereto and made a part hereof (Area C and Area D are collectively herein referred to as the "Property"); and

WHEREAS, the New Jersey Department of Environmental Protection (the "Department") has issued a Remedial Action Workplan Approval for ECRA/ISRA Case No. 90263 consisting of the December 15, 1992 approval, as modified by the January 26, 1994 approval (collectively, the "Approval"), both of which are attached hereto as Exhibit B and made a part hereof concerning the Property in which the Department has approved the use of non-residential soil standards, institutional controls, and/or engineering controls in accordance with P.L. 1993 c. 139 (S-1070); and

WHEREAS, the Declaration itself is not intended to create any interest in real estate in favor of the Department, nor to create a lien or encumbrance against the Property, but merely is intended to reflect the regulatory and statutory obligations imposed as a condition of using non-residential soil standards, institutional controls and/or engineering controls; and

WHEREAS, the term "Owner" refers to the owner of all or any part of the Property at any given point in time (which on the date hereof includes the Current Owner) together with any operators and/or lessees of all or any part of the Property together with their respective successors and assigns; and

WHEREAS, the area of the Property labelled Area C on Exhibit C attached hereto and made a part hereof contains asbestos-containing materials; and

WHEREAS, the asbestos-containing materials are covered by two feet of soil and vegetation in accordance with the Department's requirements as set forth in the Approval for the referenced ECRA/ISRA case; and

WHEREAS, in accordance with the Approval issued by the Department, Current Owner desires to provide notice to future Owners that the integrity of the soil and vegetative cover for Area C must be maintained to prevent the potential for an unacceptable risk of exposure to the asbestos-containing materials and any potential hazard to human health or the environment; and

WHEREAS, the area of the Property labelled Area D on Exhibit D attached hereto and made a part hereof contains polychlorinated biphenyl ("PCB") compounds; and

WHEREAS, the PCB compounds in Sub Area D-3 of the Property, which area is identified on Exhibit D, are covered by an asphalt cap and the PCB compounds in Sub Area D-2 of the Property, which area is also identified on Exhibit D, have been remediated to the non-residential soil standard for PCB compounds;

WHEREAS, the concentration and specific location of the PCB compounds are described on Exhibit D; and

WHEREAS, in accordance with the Approval issued by the Department, Current Owner desires to provide notice to future Owners that (i) the integrity of the asphalt cap in Sub Area D-3 of the Property and (ii) Sub Area D-2 of the Property must be maintained to prevent the potential for an unacceptable risk of exposure to the PCB compounds and any potential hazard to human health or the environment; and

WHEREAS, portions of the Property are referred to herein as Area C, Area D, Sub Area D-3, and Sub Area D-2 as defined above to be consistent with those terms as used in the Approval; and

WHEREAS, the Department's files for the referenced ECRA/ISRA case are available for review; and

WHEREAS, in accordance with the Approval, and in consideration of the terms and conditions of the Approval, and other good and valuable consideration, Current Owner has agreed to subject the Property to certain statutory and regulatory requirements which restrict certain activities at the Property, as set forth below; and

WHEREAS, Current Owner intends to notify all interested parties that such statutory and regulatory restrictions shall be binding upon and enforceable against Current Owner, future Owners, and their successors and assigns while such own and/or operate and/or lease the Property.

NOW, THEREFORE, Owner agrees to be subject to the statutory and regulatory requirements applicable to those who seek to remediate property to non-residential soil standards and/or use institutional and/or engineering controls and hereby notifies all interested parties and Owners that the applicable statutes and regulations require the following of Owner while owning, operating or leasing the Property:

1. Restricted Activities. Owner shall not allow any of the following activities at the Property:

Portion of the Property	Restricted Activities
Area C as identified in Exhibit C.	The activities shall be restricted pursuant to Paragraphs 2 and 3 below and to non-residential use.
Area D as identified in Exhibit D.	The activities shall be restricted pursuant to Paragraphs 2 and 3 below and to non-residential use.

2. Emergencies. In the event of an emergency which presents a significant risk to human health, safety or the environment and disturbs the soil and vegetative cover in Area C, the asphalt cap in Sub Area D-3, or the soil in Sub Area D-2, or requires the disturbance of such areas, the application of Paragraph 1 above may be unilaterally suspended, provided the person responding to the emergency:

i. Immediately notifies the Department of the emergency, or the Owner, upon receiving notice of the emergency, immediately notifies the Department of the emergency;

ii. Limits, to the extent practicable, both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;

iii. Implements all measures practicable and necessary to limit actual or potential, present or future risk of exposure to the asbestos-containing materials or PCB compounds to humans or the environment; and

iv. Restores the Property to the extent practicable to pre-emergency conditions and provides a report to the Department of such emergency efforts.

3. Alterations, Improvements, and Disturbances. Owner shall not make, nor allow to be made, any alteration, improvement, or disturbance in, to, or about the Property which creates an unacceptable risk of exposure to the asbestos-containing materials or PCB compounds to humans or the environment, or results in a disturbance of any engineering control designed to contain or reduce exposure to the asbestos-containing materials or PCB compounds, without first obtaining the express written consent of the Department, which consent shall not be unreasonably withheld by the Department. The Department shall respond to Owner's request for express written consent for such alterations, improvements or disturbances within ninety (90) calendar days after receiving the request. Nothing herein shall constitute a waiver of the obligation of the Owner to comply with all applicable laws, rules and regulations.

Express written consent of the Department is not required for an alteration, an improvement, or a disturbance that meets the following:

- provides for restoration of any disturbance of an engineering control to pre-disturbance conditions within sixty (60) days, and

- does not allow an exposure level above those noted under Restricted Activities, provided that all applicable worker health and safety laws, rules and regulations are followed during the alteration, improvement, or disturbance.

4. Cap Maintenance And Monitoring Plan.

(a) Sub-Area D-3. To ensure the integrity of the asphalt cap in Sub-Area D-3, a quarterly inspection will be conducted by Owner. The integrity of the cap will be visually inspected for indications of damage or deterioration that may potentially expose the underlying PCB compounds. If any portion of the cap requires maintenance, it will be repaired to the original design specifications identified on Exhibit D.

(b) Area C. To ensure the integrity of the soil and vegetative cover in Area C, a quarterly inspection will be conducted by Owner. Area C will be visually inspected for indications of erosion, which may have reduced the thickness of the soil and vegetative cover to a depth less than the design thickness of two feet. If erosion of the soil and vegetative cover has occurred, supplemental clean top soil will

be placed in the affected area and the area will be reseeded with grass seed.

5. Notice to Lessees and Other Holders of Property Interest.

(a) Owner shall cause all leases, grants, and other written transfers of interest in the Property to contain a provision expressly requiring all holders thereof to take the Property subject to the Declaration and not to violate any of the conditions of the Declaration.

(b) Nothing contained in this Paragraph 5 shall be construed as limiting any obligation of Owner to provide any notice required by any law, regulation, or order of any governmental authority.

6. Enforcement of Violations. The restrictions provided herein are for the benefit of, and shall be enforceable against any person who knowingly violates the Declaration, solely by the Department. A violation of the Declaration shall not have an adverse impact on the status of the ownership of and title to the Property. To enforce violations of the Declaration, the Department may initiate an action in Superior Court or as otherwise allowed by law against any person who is in any way responsible for a violation hereof and seek all available remedies including, without limitation, penalties and injunctive relief. Such enforcement proceedings shall not be initiated against past Owners who have not violated the Declaration.

7. Severability. If any court or other tribunal determines that any provision of the Declaration is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court or tribunal. In the event that the provision invalidated is of such a nature that it cannot be so modified, the provision shall be deemed deleted from this instrument as though it had never been included herein. In either case, the remaining provisions of the Declaration shall remain in full force and effect.

8. Successors and Assigns. The Declaration shall be binding upon Owner and upon Owner's successors and assigns while such own and/or operate and/or lease the Property, and the Department, its agents, contractors and employees, and any other person performing remediation under the direction of the Department.

9. **Termination and Modification.**

(a) The Declaration shall terminate only upon the filing of an instrument, executed by the Department, which shall be provided to the Owner for filing in the office of the Register of Deeds and Mortgages of Camden County, New Jersey, expressly terminating the Declaration.

(b) The Owner may request in writing at any time that the Department (i) modify or terminate the Declaration or (ii) initiate termination proceedings based on, for example, the Owner's proposal that the Property does not pose an unacceptable risk to human health or the environment. The Department shall, within ninety (90) calendar days after receiving the request, either:

i. Execute a termination or modification instrument; or

ii. Issue a draft notice of intent to deny the Owner's request.

A draft notice of intent to deny the request shall set forth the basis for the Department's decision. The Owner can respond to the draft denial by providing new or additional information or data. The Department shall review any such new or additional information and issue a final decision to execute the termination or modification instrument or deny the request within sixty (60) calendar days of the Department's receipt of the Owner's response.

IN WITNESS WHEREOF, Current Owner has executed this instrument as of the date first written above.

ATTEST:

Robert L. Poyourow
Assistant Secretary
[Print name and title]

GAF BUILDING MATERIALS CORPORATION

By: _____

Mark A. Buckstein
Executive Vice President
[Print name and title]

STATE OF NEW JERSEY)
) ss:
COUNTY OF PASSAIC)

I CERTIFY that on August 1, 1995, Robert L. Poyourow personally came before me and this person acknowledged under oath, to my satisfaction, that:

(a) this person is the Assistant Secretary of GAF Building Materials Corporation, the corporation named in the attached document;

(b) this person is the attesting witness to the signing of the document by the proper corporate officer who is Mark A. Buckstein, the Executive Vice President of the corporation;

(c) this document was signed and delivered by the corporation as its voluntary act duly authorized by a proper resolution of its Board of Directors;

(d) this person knows the proper seal of the corporation which was affixed to this document; and

(e) this person signed this proof to attest to the truth of these facts.

Robert L. Poyourow, Assistant Secretary

Signed and sworn to before me on
this 1st day of August, 1995.

Notary Public

DOROTHY A. SIBELNICK
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires August 30, 1995

archives\certif

ATTACHMENT C

KEATING Environmental Management, Inc.
123 John Robert Thomas Drive, Exton, Pennsylvania 19341
Tel. (610) 594-2600 Fax (610) 594-6100

FINAL
PRELIMINARY ASSESSMENT REPORT

General Aniline & Film (GAF) Facility
Gloucester City,
Camden County, New Jersey

File No. 6833

October 2007

Prepared for:

K&S Partners
1600 Arch Street
Suite 300
Philadelphia, PA 19103

C

KEATING Environmental Management, Inc.
123 John Robert Thomas Drive, Exton, Pennsylvania 19341
Tel. (610) 594-2600 Fax (610) 594-6100

FINAL
PRELIMINARY ASSESSMENT REPORT

General Aniline & Film (GAF) Facility
Gloucester City,
Camden County, New Jersey

File No. 6833

October 2007

Prepared for:

K&S Partners
1600 Arch Street
Suite 300
Philadelphia, PA 19103

Prepared by:

Paul M. Davis
Senior Environmental Specialist

Reviewed by:

Christopher Orzechowski
Project Manager

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

TABLES

FIGURES

EXECUTIVE SUMMARY

At the request of K&S Partners, Keating Environmental has conducted a Preliminary Assessment (PA) of the former General Aniline & Film (GAF) Corporation Facility, located at Charles Street and Water Street in Gloucester City, Camden County, New Jersey. This assessment was performed in accordance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (N.J.A.C. 7:26E-3, Subchapters 3.1 and 3.2). The purpose of this PA was to evaluate the potential for hazardous materials to exist on the property at levels likely to warrant mitigation.

The subject site consists of the following areas: Powerhouse, Scale House, Storage Shed, Electrical Control House, Water Street Warehouse, School House Building, inactive Railroad Siding (between Blocks 116.01 and 120.01), and the Charles Street Warehouse, which were all part of the former GAF facility. These areas are all located east of Water Street and were not located within the manufacturing/process area of the former GAF facility. The site is within the Proposed Brownfield Redevelopment Area - Southport Redevelopment Area, and is currently zoned as BI (Business Industrial). The majority of the site is currently unoccupied and inactive (except for the Charles Street Warehouse), and no operations have been performed at the site since approximately 1984. The entire site encompasses approximately 16.5-acres.

Portions of the site were used as a horse racing facility (South Jersey Jockey Club Grounds) between the late 1800s and early 1900s. In the early 1900s to approximately the 1930s, portions of the site were used by a shipbuilding company (NJ Shipbuilding of the Pusey & Jones Company). In 1918, The Lang Company (paper mill) began using the site, with the construction of the Powerhouse building. In the 1930s, Ruberoid Company took over operations of the Lang Company, and in 1967, GAF took over operations of the Ruberoid Company. GAF ceased operations at the site in approximately 1983. K&S Partners plans to develop the site and surrounding area for residential use.

The historic use of the site indicates that hazardous and petroleum products were used at the facility.

With respect to this PA, Keating Environmental noted the following evidence of recognized potential areas of concern (AOCs) associated with the site:

AOC # 1 – Aboveground Storage Tanks and Associated Piping

AOC # 1; Sub Area A: Two Former 8,000-Gallon Diesel ASTs (Powerhouse Area)

Two 8,000-gallon aboveground storage tanks (ASTs) were previously located outside the southeastern corner of the Powerhouse building and have been removed from the site.

In 1991, seven surface soil samples were collected at the location of the two 8,000-gallon diesel ASTs. The samples were analyzed for total petroleum hydrocarbons (TPHC) and base neutrals plus 15 (BN+15). Two samples revealed TPHC at concentrations between 11,000 parts per

million (ppm) and 15,300 ppm. All of the samples exceeded the benzo(a)pyrene (BaP) compound level of 0.66 ppm, but the highest exceedance was 3 ppm. Some of the other carcinogenic polycyclic aromatic hydrocarbons (CaPAHs), also, slightly exceeded the residential direct contact soil cleanup criteria (RDCSCC) levels. All the soil beneath the former tank locations were excavated to 2-feet below ground surface (bgs) and disposed of off-site. In March of 1993, eight post-excavation samples were collected from 24 to 30-inches bgs and analyzed for TPHC and BN+15. All of the post excavation sample results were below the RDCSCC levels, except for three samples. An additional two feet of soils were excavated at these locations and one post-excavation sample (42 to 48-inches bgs) was collected for TPHC and BN+15 in which all results were determined to be below the RDCSCC levels.

The NJDEP concluded that only three post excavation soil samples had slight exceedances above the RDCSCC levels and that the samples average below the RDCSCC via averaging the post excavation samples from the same depth interval. NJDEP issued No Further Action (NFA) for this sub-AOC in May 1995.

Even though eight centerline samples were collected beneath the USTs, as opposed to twelve, and the fact that over 15 years have elapsed since the tanks have been removed, in which natural attenuation has occurred to further reduce the contaminants, Keating Environmental does not recommend any further investigation regarding the two former 8,000-gallon ASTs in the Powerhouse area.

AOC # 1; Sub Area B: 400,000-Gallon Fuel Oil No. 6 AST and 1,000-Gallon Kerosene AST Area (Powerhouse Area)

The 400,000-gallon AST was used to store No. 6 fuel oil used by the Powerhouse to generate steam. The outside surface of the AST is insulated and the AST is situated within a concrete secondary containment dike. It is unknown how much product remains in the tank. Associated piping and valves are also located within the containment area adjacent to the tank. Also, a 1,000-gallon AST is located near the northern side of the 400,000-gallon AST and was reportedly used to store kerosene.

In September of 1991 four surface soil samples were collected in areas of visually stained soils and stressed vegetation from within the secondary containment dike. The samples were analyzed for TPHC and BN+15. TPHC was detected as high as 38,200 ppm and several CaPAH's (associated with the BN+15 analysis) were detected at levels as high as 7 ppm.

Based on the analytical results, GAF proposed to the NJDEP to excavate the soils at two locations, followed by the collection of post-excavation samples, and to compare the results to the RDCSCC levels. GAF excavated five cubic yards of soil from one location and 1.5 cubic yards of soil from another location. In March of 1993, four post-excavation samples were collected for TPHC and BN+15 from the excavations. All post excavation sample results were below the RDCSCC levels. NJDEP issued a No Further Action letter for this area in May 1995.

During the 2007 site reconnaissance, the interior of the containment area was visually inspected for possible releases. Several areas of black oily liquids were observed beneath piping and valve connections within the containment area. Keating Environmental recommends that these release areas be removed by excavation followed by the collection of post excavation soil samples in accordance with 7:26E-6.4 and the NJDEP Field Sampling Procedures Manual (August 2005). Since kerosene and fuel oil No. 6 were stored in the area, the samples will be analyzed for TPHC, VO+10, and naphthalene's and the analytical results will be compared to residential values.

However, prior to the excavation of the observed release areas, Keating Environmental recommends that the secondary containment dike be removed, all of the associated piping, and the two ASTs be emptied, inerted, dismantled, and removed from the site in accordance with local, State, and Federal regulations.

Following the removal of the ASTs, soil sampling for the AST locations will be in accordance with 7:26E-3.9(a)1 and the soil sampling for the piping locations will be in accordance with 7:26E-3.9(a)4&5. Also, the sampling will be in accordance with the NJDEP Field Sampling Procedures Manual (August 2005). The analytical results will be compared to residential values. Since the two tanks and associated piping were used for the storage and distribution of kerosene and No. 6 fuel oil, the following compounds need to be analyzed; TPHC, VO+10, and naphthalene's.

AOC # 1; Sub Area C: 550-Gallon Heating Oil No. 2 AST (School House Area)

Tank No. A-3 was a 550-gallon No. 2 fuel oil tank which sat in a depression in the ground near the northeastern corner of the school house building. This tank was last used in 1979. In December 1988, this tank was decommissioned and the empty shell of the UST was moved and placed along the southern side of the eastern most school house building addition.

In 1991, two soil samples were collected from the soils beneath the elevated tank for TPHC and BN+15 analyses. TPHC was detected as high as 1,020 ppm and both samples had some BN+15 concentrations above the RDCSCC values. As a result of the elevated soil concentrations, GAF excavated approximately 10 cubic yards of contaminated soils from beneath the tank (the tank was empty and relocated to do the work) and two post-excavation samples were collected for TPHC and BN+15 analyses. All post-excavation analytical results were below the RDCSCC levels. The excavation was backfilled with certified clean fill. The NJDEP issued a NFA letter in May 1995, since all of the levels were below the RDCSCC levels.

During the site reconnaissance in June 2007, the abandoned 550-gallon steel tank was observed along the southern exterior wall of the eastern most addition. Keating Environmental recommends that the tank be removed from the site and recycled at a steel scrap facility and no further action regarding the original location of the tank is recommended.

AOC # 2 – Former 100-Gallon Oil Water Separator and French Drain System (Powerhouse Area)

An oil water separator was associated with the stormwater drainage system for the 400,000-gallon AST containment area. Stormwater inlets inside the secondary containment drained to the oil water separator prior to discharging to the city stormwater system. During the site reconnaissance in June 2007, both drain inlets were observed, but the oil water separator was not observed and is believed to have been removed.

In 1991, stained soils were observed within the secondary containment area. The stained soils were excavated, approximately one cubic yard, and two post-excavation samples were collected for TPHC and BN+15 analyses. All of the post-excavation sample results were determined to be below the RDCSCC levels. The excavation was then backfilled with certified clean fill.

Also, in 1991, one soil sample was collected directly beneath the oil water separator outlet to the storm water system for TPHC and BN+15 analyses. All of the analytical results were determined to be below the RDCSCC levels. The NJDEP issued a NFA letter in May 1995, since all of the levels were below the RDCSCC levels.

Based on the NJDEP's conclusion, Keating Environmental does not recommend any further investigation regarding the former oil water separator. Keating Environmental recommends that when the two ASTs and the associated piping are removed that the French drain system within the secondary containment also be removed and the integrity of it inspected. If there are any indications that the French drain may have leaked, soil sampling and remediation will occur at that time.

AOC # 3 – Dry Well Associated with the Two Former 8,000-Gallon Diesel ASTs (Powerhouse Area)

A dry well was located adjacent to the two former 8,000-gallon diesel ASTs. The dry well permitted rain water to drain from the Powerhouse yard to the subsurface soils. During the 2007 site reconnaissance this dry well was not observed.

A reported overfill of one of the tanks occurred and flowed into the dry well. The dry well and impacted soils within the area were remediated. Subsequently, during the 1991 sampling investigation, three soil samples were collected in this area. One sample was collected from the soil within the dry well catch basin and the other two samples were collected from soil adjacent to the dry well inlet. All three samples were analyzed for TPHC and BN+15 analyses. All of the analytical results were below the RDCSCC levels. The NJDEP issued a NFA letter in July 1992, since all of the levels were below the RDCSCC levels.

Based on the NJDEP's conclusion and that over 15 years have elapsed since the tanks have been removed, in which natural attenuation has occurred to further reduce the contaminants, Keating Environmental does not recommend any further investigation regarding the dry well adjacent to the two former 8,000-gallon ASTs.

AOC # 4 – Concrete Trench for Pipeline from AST Area to Powerhouse Building and Former Aboveground Piping from Pier to 400,000-Gallon AST (Powerhouse Area)

AOC # 4; Sub Area A – Concrete Trench for Pipeline from AST Area to Powerhouse Building (Powerhouse Area)

A concrete trench housing piping that leads from the 400,000-gallon AST to the Powerhouse building is located between the northern side of the containment wall to the southeastern side of the Powerhouse building. The piping inside the trench conveyed the heating oil No. 6 to the boilers in the Powerhouse building.

The trench was visually inspected in 1991 for indications of petroleum staining and to determine the integrity of the concrete. No stains were observed and the integrity of the concrete was intact. Two test pits were subsequently excavated adjacent to the concrete trench in order to collect soil samples. One soil sample was collected from each test pit for TPHC and BN+15 analyses. All of the analytical results were below the RDCSCC levels.

Keating Environmental recommends removing the piping when the associated AST is removed. Also, following the removal of the piping, visually inspect the trench for indications of petroleum staining and to determine the integrity of the concrete. If there are no indications of a release, Keating Environmental recommends no further action. However, if there are indications of a release, the soil sampling will be in accordance with 7:26E-3.9(a)4&5 and with the NJDEP Field Sampling Procedures Manual (August 2005). The analytical results will be compared to residential values. Since the associated piping was used for the distribution of No. 6 fuel oil, only TPHC needs to be analyzed.

AOC # 4; Sub Area B – Former Aboveground Piping from Pier to 400,000-Gallon AST (Powerhouse Area)

A former aboveground pipeline was used to transport fuel oil from barges, secured at the end of the pier along the Delaware River, to the 400,000-gallon AST. This pipeline was not observed during the 2007 site reconnaissance. In 1991, the pipeline and pier were visually inspected for indications of a petroleum discharge; however, none were found. Six samples were collected from the soil beneath valves and flanges for TPHC analysis. Two of the samples were further analyzed for BN+15. Three of the six samples analyzed for TPHC were greater than 1,000 ppm and none were greater than 10,000 ppm. Also, none of the samples exceeded the BN+15 RDCSCC values. Two additional samples were collected for BN+15, because their TPHC levels were above 1,000 ppm. Only one location had BN+15 levels above the RDCSCC, however, all individual base neutrals were below 2.2 ppm.

Approximately four cubic yards of soil was excavated from this one location and disposed of off-site. Two post-excavation samples were collected for TPHC and BN+15 analyses. All of the analytical results were below the RDCSCC levels and the excavation was backfilled with clean fill.

The NJDEP issued a NFA letter in May 1995, since all of the levels were below the RDCSCC levels. Keating Environmental recommends no further action regarding the sampling beneath the former piping in the Powerhouse area.

AOC # 5 – PCB Contaminated Areas and Areas of Discharge per N.J.A.C. 7:1E (Powerhouse Area)

Unauthorized releases of PCBs have been reported for the site. In 1978, two transformers were accidentally knocked together when being removed, which caused a release of PCB oil. The USEPA was notified and the impacted soils were removed and properly disposed of off-site. Additional sampling conducted in November 1985 indicated that PCB's still persisted in the soils, so additional soil excavation took place in April 1986. These two locations were again investigated in 1991. The first area was identified as the "PCB Spill Area" and the second area was identified as the "PCB Transformers Currently in Use", even though no PCB transformers were actually in use in 1991 at the site. Three samples were collected from the PCB Spill Area (two from depths of 30 to 36-inches and one from 24 to 30-inches bgs) for TPHC and PCB analyses. Four samples were also collected (one at 12 to 18-inches, one at 6 to 12-inches, and two at 0 to 6-inches bgs) for TPHC and PCB analyses from the PCB Transformer Area. The analytical results showed all TPHC levels well below the action level, three PCB samples were above the RDCSCC level and one sample was above the non-residential direct contact soil cleanup criteria (NRDCSCC) level at 7.6 ppm. In addition to the four samples collected at the PCB transformer area, eight wipe samples were collected from the transformer's concrete supporting pad. The NJDEP did not accept wipe samples, so eight chip samples were then collected from the concrete pad.

In March of 1993, the concrete pad was broken into pieces and placed in a roll-off container for off-site disposal. Additionally, 17 tons of contaminated soil was excavated from the PCB Spill Area and placed in the container. Post-excavation samples were then collected, which indicated that PCB (Aroclor 1260) persisted in both the sidewalls and bottom of the excavation. In April of 1993, an additional 34 tons of soil was excavated and six post-excavation samples were collected, of which, four revealed PCB levels still above the RDCSCC. Because the data indicated the potential that another source existed, a total of 81 samples were collected. The results revealed various PCB concentrations across the transformer AOC. GAF submitted a RAW to the NJDEP to address the various PCB levels. The NJDEP approved the RAW, which subdivided the transformer AOC into three sub-areas, because each sub-area was being remediated differently.

AOC # 5; Sub Area A – Transformer Area Near Sidewalk (Powerhouse Area)

This area is located in front (west) of the powerhouse building along Water Street on the City's sidewalk. Six soil samples were collected (four from 0 to 6-inches bgs and two from 18 to 24-inches bgs). Also, four chip samples were collected in this area. PCB exceedances ranged between 0.58 ppm and 6.8 ppm.

As a result of the analytical results, 75 linear feet of sidewalk followed by the excavation of the underlying soil to a depth of three feet was performed by GAF. A total of 75 cubic yards of soil was removed. Seven post-excavation soil samples were collected for PCB analysis. All of the analytical results were below the RDCSCC levels. The area was backfilled with certified clean fill and a new sidewalk was constructed.

The NJDEP issued a NFA for AOC # 5; Sub Area A in July 1995. Keating Environmental does not recommend any further action in the area, based on the NJDEP NFA ruling.

B.5.2 AOC # 5; Sub Area B – Widespread PCB-Impacted Area (Powerhouse Area)

This area between the southern side of the Powerhouse building extending to Charles Street to the south, and from the 400,000-gallon AST westward to Water Street had two sample locations, which had PCB concentrations at 3.3 ppm and 48 ppm above the NRDCSCC.

Based on the analytical results, 1.3 cubic yards of contaminated soil was removed from one location and two post-excavation samples were collected from the sidewall and bottom of the excavation for PCB analysis. Five cubic yards of soil was excavated from the other location and two post-excavation samples were collected from the sidewall and bottom of the excavation for PCB analysis. All of the analytical results were below the NRDCSCC levels from both locations. The two locations have been backfilled with certified clean fill. A Declaration of Environmental Restriction (DER) has been filed for this area.

The NJDEP issued a NFA for AOC # 5; Sub Area B in July 1995, and a DER was filed for non-residential use. Keating Environmental recommends further action in this area to delineate the PCB impacts and to remediate the impacted area to residential levels, since the area will be used for residential use.

AOC # 5; Sub Area C – Transformer Area Western Side of Powerhouse Building (Powerhouse Area)

Twenty six soil samples were collected in the area west of the Powerhouse building and Water Street for PCB's. The analytical results ranged from 0.06 ppm to 10,000 ppm.

GAF proposed to the NJDEP to excavate soils to the PCB 50.ppm Impact to Ground Water Soil Cleanup Criteria (IGWSCC)/Toxic Substance Control Act (TSCA) standard for hazardous waste, collect post-excavation samples, install a two-inch thick asphalt cap, and implement a DER.

Soils were excavated around two locations and six post-excavation soil samples were collected for PCB analysis. All of the analytical results were below the 50 ppm IGWSCC/TSCA Standards. The area excavated was backfilled with certified clean fill and a 4-inch thick asphalt cap was installed over the area. The four-inch cap was constructed of two-inch thick binder course and two-inch thick asphalt layer. A six-foot chain-linked fence with two-strand barb wire was also installed around the site, and a DER was filed.

The NJDEP issued a NFA for AOC # 5; Sub Area C in July 1995, and a DER was filed. Keating Environmental recommends further action in the area to remediate the PCB impacts to residential levels, since the area will be used for residential use. However, the area could remain as an asphalt covered parking lot, with institutional controls implemented rather than excavating and disposing the impacted soils.

AOC # 6 – Underground Storage Tanks (Storage Shed Area)

Two USTs were located near the storage shed along Water Street. One UST was a 10,000-gallon steel tank used for the storage of kerosene, and the other tank was a 1,000-gallon steel tank used for the storage of leaded gasoline. The 10,000-gallon kerosene UST was last used in 1972 and the 1,000-gallon leaded gasoline UST was last used in 1985.

Both tanks were permanently closed in December of 1988 by removal of the top sections of the tanks, filling the tank inverts with inert materials and backfilling the area to grade. In 1991, six soil borings were installed around the 10,000-gallon kerosene UST, and four soil borings were installed around the 1,000-gallon gasoline UST. The samples collected from around the kerosene UST were analyzed for TPHC, VO+10, naphthalene, and xylenes. The samples collected from around the leaded gasoline UST were analyzed for TPHC and VO+15 analyses. All of the analytical results were below the RDCSCC levels.

However, NJDEP required GAF to verify that the samples were collected from 0 to 6-inches beneath the tank inverts, as well as, requiring additional delineation samples for VO+10 and TPHC analyses. In January 1993, two test pits were excavated adjacent to two previous sample locations to determine the invert depths and for the collection of the additional delineation samples. The test pits revealed that the tank invert depth of the 10,000-gallon kerosene tank was 11.5-feet bgs and 6-feet bgs for the 1,000 gallon gasoline tank. This information revealed that the ten samples collected previously, in 1991, were obtained from above the tank inverts. One soil sample was collected from the bottom of each test pit to determine the TPHC levels below each tank invert. Both of these samples were collected from 0 to 6-inches below the UST invert. One sample had a TPHC concentration at 8,000 ppm. Since the 1991 samples were not collected from 0 to 6-inches beneath the UST inverts, and the additional delineation samples indicated elevated levels, GAF removed the USTs from the ground.

In March of 1993, the two USTs were removed and disposed of off-site. Post-excavation samples were collected at five-foot intervals along the centerline of the 1,000-gallon gasoline UST excavation and analyzed for VO+10 and lead analyses. Post-excavation samples were collected along the sidewalls of the 10,000 gallon kerosene UST excavation, because a concrete anchoring pad was located at the bottom of the excavation, and analyzed for VO+10 and naphthalene. All of the analytical results were below the RDCSCC levels.

NJDEP issued a NFA ruling for this AOC in May of 1995. Keating Environmental does not recommend any further action in the UST areas, based on the NJDEP NFA ruling.

AOC # 7 – Historic Fill or any other Fill Material

According to the NJDEP Historic Fill Map of the Philadelphia Quadrangle 2004 (HFM-102), historic fill is present on portions of the site (predominantly within Block 116.01). Dredge materials from nearby waterways were placed on this area of the site to raise its topographic grade and permit site usage.

In addition, GAF used much of Block 116.01 as an on-site landfill for process waste generated during the manufacturing of ACM piping materials and other wastes. In 1991 a magnetometer survey was conducted over the area. Five test pits were excavated through the fill material until the underlying native soil was reached. One sample was collected from the sidewall of each test pit for PP+40 (minus pesticides), plus PCB's and asbestos analyses. All of the analytical results were below the RDCSCC levels. To determine the extent and quantity of the ACM fill material, a sampling grid was established on a 60-foot grid and 63 test pits were excavated. One sample was collected from each of the 63 test pits for bulk asbestos content/analysis. All of the test pits were then backfilled to grade.

To minimize asbestos disturbance, a two-foot thick layer of clean soil (11,275 tons) was placed over the entire 5.5 acre ACM-impacted landfill area. The soil cap was seeded with grass and a six foot high fence with 2-strand barb wire was installed around the entire landfill area. Also, a DER was filed for this area and NJDEP issued a NFA.

Keating Environmental recommends that the soil cap remains undisturbed and no soil disturbances occur when the area is developed. Also, since the area will be used for residential uses, an asphalt covered parking lot should be installed over this area or the area be used as an open space area, with the maintenance of the intact cover. Also, pertaining to the presence of historic fill on the property, Keating Environmental does not recommend any further investigation, due to the presence of the engineered soil cap that is in place over the ACM fill material.

AOC # 8 – Electrical Transformers and Capacitors (Electrical Control House)

Several defunct transformers and electrical switches were observed inside the electrical control house located off of Water Street. It is unknown if the transformers and switches contain PCB-laden oil. No staining was observed on the concrete floor surrounding these electrical devices. Keating Environmental recommends that the oil remaining in them be sampled for PCBs, and according to the analytical results, the electrical devices be removed from the site according to local, State, and Federal regulations.

Also, during the site reconnaissance survey, several pole-mounted transformers were observed adjacent to the western side of the site property, along Water Street, near the storage shed and scale house. The transformers are owned and maintained by PSE&G Utilities. Visual inspection of the transformers, poles, and the surrounding ground surfaces did not indicate any staining or stressed vegetation. Also, a pad-mounted transformer is located along the eastern side of the Charles Street Warehouse. No staining was observed on the surrounding surfaces of the

transformer. Based on the historical widespread impacts of PCBs at the site, Keating Environmental recommends soil sampling around the electrical control house building and in proximity to the other transformers at the site.

AOC # 9 – Floor Drains

AOC # 9; Sub Area A – Floor Drains inside the Powerhouse Building

Floor drains were observed inside the Powerhouse building. It is unknown where the floor drains discharge to, but it is likely that they discharge to the public sewer system. Loose ACM material was observed throughout the building and oily puddles were also observed in the building. There is potential that these substances and other unknown materials have reached the floor drain system inside the building.

Since the Powerhouse building will be dismantled and razed, Keating Environmental recommends that the floor drain systems be inspected for its integrity at that time and subsurface soil samples be obtained from beneath the razed structure.

AOC # 9; Sub Area B – Floor Drain inside the Electrical Control House

Floor drains were observed inside the electrical control house. It is unknown where the floor drains discharge to, but it is likely that it discharge's to the public sewer system. Electrical transformers and switches (possibly containing PCB-oils) were observed inside the building. There is potential that substances could have reached the floor drain system.

Since the electrical control house will be dismantled and razed, Keating Environmental recommends that the floor drain system be inspected for its integrity at that time and subsurface soil samples be obtained from beneath the razed structure.

AOC # 9; Sub Area C – Floor Drains inside the Charles Street Warehouse

Floor drains were observed inside the Charles Street Warehouse. It is unknown where the floor drains discharge to, but it is likely that they discharge to the public sewer system. The floor drains were located in an area of the warehouse that may have stored chemicals and there is potential that substances could have reached the floor drain system.

Since the Charles Street Warehouse will be dismantled and razed, Keating Environmental recommends that the floor drain system be inspected for its integrity at that time and subsurface soil samples be obtained from beneath the razed structure.

AOC # 10 – Boiler Rooms in Powerhouse Building and Coal Hopper

The Powerhouse building generated power and steam to the facilities that occupied the site, and therefore utilized boilers. Also, a railroad siding unloading hopper is located on the east side of the Powerhouse building. The coal hopper is constructed of steel and housed in a concrete room

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beneath the railroad siding. The coal was unloaded into the hopper from the railcars by gravity and subsequently placed on a conveyor for transport to the furnace as a fuel source. During the previous Remedial Investigation, the potential environmental impact from the coal unloading operation was determined to be minimal, and no environmental sampling or remedial action was required by the NJDEP for that area. Since the Powerhouse building and coal hopper will be dismantled and razed, Keating Environmental recommends that the subsurface beneath the razed structures be investigated at that time.

AOC # 11 – Surrounding Properties

The subject site as well as numerous facilities are identified within the ASTM E 1527-05 specified search radii and are located upgradient or in close proximity to the site, based upon the inferred regional groundwater flow direction. Therefore, it is possible that site soils or groundwater have been adversely impacted by a release from the site and/or these facilities.

The database identified 35 "orphan" sites whose actual location could not be mapped. Keating Environmental did identify three of these facilities (ARCO, Vanguard, and AMSPEC) as abutting the subject site. The remaining sites may be located within the ASTM E 1527-05 specified search radii.

The presence of surrounding facilities in the state and federal databases does not necessarily indicate that these facilities are impacting regional soil or groundwater quality, but provides a relative indication of hazardous material or petroleum product use in the area of the site, and the potential for on-site impacts from these facilities. However, no obvious evidence was observed during the performance of this assessment to indicate that site soils and groundwater have been impacted by neighboring or off-site regulated sources; therefore, no further investigation is recommended at this time. However, if a higher level of confidence is desired, a subsurface investigation consisting of the installation of monitoring wells followed by groundwater sampling, along the property boundaries, should be performed in accordance with the NJDEP Field Sampling Procedures Manual (August 2005), with results compared to residential values.

AOC # 12 – Railroad Siding

An inactive railroad siding owned and operated by CSX is located between Block 116.01 and Block 120.01, and runs along the western side of the Charles Street Warehouse. It is unknown if the rail siding was ever electrified. It is currently overgrown with vegetation and is not in operation. Keating Environmental recommends that soil sampling be performed along the rail siding to confirm the absence of contamination, and compare the results to residential values.

AOC # 13 – Historic Operations

As mentioned above, the site was used for industrial operations. Based on the past operations that occurred at the site the potential exists that portions of the site may have been impacted by these historic operations.

Keating Environmental recommends a subsurface investigation be performed in portions of the site to determine the condition of surface and subsurface soils, as well as groundwater, and all analytical results be compared to residential values. Details of the suggested sampling locations are discussed above.

AOC # 14 – Groundwater

Because some of the areas of concern involved potential surface and subsurface soil contamination, potential impact to groundwater quality was identified as an area of concern during the Remedial Investigation in 1991. A total of four groundwater monitoring wells were installed at the facility. Three of the wells, MW-1, MW-2, and MW-3 were located within the ACM Fill Area. The fourth well, MW-4, was located adjacent to the two previously closed and removed USTs, near the storage shed along Water Street.

Groundwater quality samples were collected from the monitoring wells and analyzed on two occasions; the first round of sampling was conducted in October of 1991 and the second round was conducted in November of 1991. The samples collected from monitoring wells MW-1, MW-2, and MW-3 were analyzed for Priority Pollutants+40, excluding pesticides but included PCB's. The samples collected from MW-4 were analyzed for VO+ 15, BN + 15, Methyl Tertiary Butyl Ether, and Tertiary Butyl Alcohol.

No compounds were detected in concentrations exceeding the groundwater quality standards in any of the wells, during the first round of sampling. During the second round of sampling, the only compound detected in a concentration exceeding the groundwater quality standard was Arsenic, which was detected at a concentration of 46 µg/l in MW-2.

Although the concentration of arsenic detected at the MW-2 location slightly exceeded the groundwater quality standard, the NJDEP did not consider this condition to be of concern, as detailed in the NJDEP's cleanup plan approval letter. No additional sampling or analysis of the groundwater has been performed and no remedial action has been conducted.

GAF requested to NJDEP approval to close the wells, and following the receipt of written notification from the NJDEP that the wells may be closed, GAF stated that they will properly abandoned all four monitoring wells in accordance the procedures presented in N.J.A.C. 7:7-9.

No additional information was found in the file regarding the final closure of the wells. Keating Environmental recommends that if the wells still exist at the site that they be sampled.

B.15 AOC # 15 – Building Interiors

Keating Environmental recommends that a comprehensive asbestos survey be conducted at the site. Friable and/or non-friable asbestos-containing materials are remaining in site buildings. The abatement of all asbestos-containing materials, which will be disturbed during demolition/renovation will need to be completed before the start of the demolition/renovation

activities. In addition, the removal and disposal of ACM will follow Federal, State, and local regulations.

ATTACHMENT D

PRELIMINARY ASSESSMENT REPORT/
SITE INVESTIGATION WORKPLAN
707 WATER STREET
BLOCK 110, LOTS 2.01, 3, 3.01, 4, 5, 6, 20
AND PART OF LOTS 14 AND 17
GLOUCESTER CITY, CAMDEN COUNTY, NEW JERSEY

VOLUME I OF II

MATRIXNEWORLD

Enabling Progress

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Revision 0

March 2005

Matrix No. 04-427E-01

1955 Philadelphia Vicinity East 1 Quadrant Topographic Map
The 1955 topographic map indicates a railroad line running down the center of the pier on the western side of the subject property. The remainder of the pier is undeveloped; the structure on the western end of the pier is not identified. The surrounding property is similar to the 1943 topographic map. However, a new railroad extension is identified south of the subject property and there are additional structures associated with the property located southwest of the subject property.

1967 Philadelphia Quadrant Topographic Map
The 1967 Philadelphia topographic map indicates that the subject property is similar to the 1955 topographic map. North of the subject property there has been an extension of land added westward into the Delaware River. This area contains five large aboveground storage tanks. East of the subject property and north of Charles Street there appears to be two aboveground tanks associated with the building identified on the 1943 topographic map. Southeast and south of the site appear to be similar to the 1955 topographic map.

1973 Philadelphia Quadrant Topographic Map
The subject property is similar to the 1967 topographic map. North and east of the subject property are also similar to the 1967 topographic map. A small building has been added just south of the subject property and there are four tanks located along the Delaware River and associated with the property located south and southwest of the subject property.

1994 Philadelphia Quadrant Topographic Map
The 1994 Philadelphia topographic map indicates that the buildings on the subject property are apparently new construction. These buildings are located in the same area as the buildings identified on the previous topographic maps. An additional tank is indicated north of the subject property. No other significant changes are observed from the 1973 topographic map.

1995 Philadelphia Quadrant Topographic Map
There are no significant changes from the 1994 topographic map. No topographic changes onsite are indicated.

Federal, State, County and Local Government Files
To evaluate the environmental status of the site, inquiries have been made of Federal and state regulatory agencies. A review of available environmental databases was also conducted to determine if the site is included on United States Environmental Protection Agency (USEPA) and State of New Jersey environmental databases. A copy of the environmental database report is included in Appendix H. The GAF Corporation was listed on the CERCLIS, CORRACTS, RCRA-SQG, SHWS, UST, and AUL databases, as described below. Branca Metals was not identified on any of the EDR databases.

1. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) contains data on potentially hazardous waste facilities that have been reported to EPA by states, municipalities, private companies, and individuals pursuant to Section 103 of CERCLA. CERCLIS contains facilities that are on the National Priority List (NPL) or facilities which are in the screening or assessment phase for possible inclusion on the NPL. The most recent version of the CERCLIS database is dated August 10, 2004.

GAF Corporation was identified on the CERCLIS database. GAF Corporation is not a federal facility and this listing is for a state-lead cleanup. A discovery, preliminary assessment and site inspection for the site were done under CERCLIS; however, the site received non-NPL status on September 29, 1992 and was deferred to the Resource Conservation and Recovery Act (RCRA) program.

2. Corrective Action Report (CORRACTS) identifies hazardous waste handlers with RCRA corrective action activity. The most recent version of the CORRACTS database is dated September 23, 2004.

   The GAF Corporation is identified for mineral wool manufacturing and all other miscellaneous nonmetallic mineral product manufacturing. The GAF Corporation was assigned a medium corrective action priority and request for authorization (RFA) was completed on June 9, 1993.

3. Resource Conservation and Recovery Information System (RCRIS) includes selective information on facilities which generate, transport, store, treat, or dispose of hazardous waste as defined by RCRA. Inclusion on the list does not necessarily indicate confirmed environmental contamination, only that the potential exists. The most recent version of the RCRIS database is dated August 10, 2004.

   The GAF Corporation was identified as small quantity generator facility and no violations were found for the facility. The USEPA identification number for GAF Corporation is NJD043292606.

4. Known Contaminated Sites (State Hazardous Waste [SHWS]) are sites under the review of the State of New Jersey's Site Remediation Program with levels of soils or groundwater contamination above New Jersey's applicable cleanup criteria for soil or groundwater. The most recent version of the SHWS database is dated May 1, 2001.

   The case for GAF Corporation was assigned to the Bureau of Environmental Evaluation Cleanup & Responsibility Assessment. The case is identified as being closed with restrictions and a no further action (NFA) determination was issued on August 16, 1995.

5. Underground Storage Tanks (USTs) are regulated under Subtitle I of RCRA and must be registered with the state. The most recent version of the UST database is dated October 8, 2004.

   GAF Corporation (Facility ID 005843) was identified as having a No. 1 kerosene UST abandoned in place and a No. 2 home heating oil UST removed on December 15, 1988. A leaded gasoline UST was also abandoned in place on November 15, 1988.

6. Sites with Closed Case(s) with Restrictions (AUL) contains sites where engineering and/or institutional controls remain in place as part of a remedial action to address soil and/or groundwater contamination. These restrictions ensure protection of human health and the environment as long as they are maintained. The most recent version of the AUL database is dated May 1, 2001.

   The GAF Corporation is identified as a closed case with restrictions.

The GAF Corporation was also listed on the NY Manifest database as shipping non-listed ignitable wastes twice and non-listed reactive wastes in metal drums and barrels on November 7, 1986. The handling method for the waste was identified as treatment.

In order to determine if any environmental records or permits are available for the site, Freedom of Information Act (FOIA) requests were sent to USEPA, the Camden County Department of Health, and the Gloucester City Fire Department. In addition, an Open Public records Act (OPRA) request for the subject site was filed with the NJDEP. A response to the information request was obtained from the Camden County Health Department; however to date a search of county records for the subject property has not been conducted. Copies of FOIA requests, responses, and file review information are included as Appendix I. The following significant findings with regard to the site were noted in the file reviews:

- EPA indicated in correspondence dated January 31, 2005 that there are no RCRA files for GAF Corporation.
- To date, a response has not been received from the Gloucester City Fire Department with regard to the individual FOIA request.

On January 10, 2005 Matrix conducted a file review at NJDEP related to the former GAF site. The following significant findings were identified by Matrix as a result of the file review and other information related to the subject property.

- The subject site was previously involved in the recycling of corrugated, mixed paper, woodchips and saw dust into felt paper for roofing, flooring, and the production of vinyl siding. Asbestos pipe insulation was also reportedly manufactured by GAF, but only on GAF property located north of the subject site. Operations at the site began in 1927 with the Lang Company (manufacturers of felt base roofing paper), which was taken over by the Ruberiod Company around 1945. Based on the Sanborns, other operations on the site prior to the Lang Company included the Pennsylvania Shipbuilding Company.
- Investigation and remedial actions at the subject site were conducted under Industrial Site Recovery Act (ISRA) Case No. 90263. The site was issued a letter of no further action by the NJDEP in 1995. Two areas identified as area "C" and area "D" were remediated through a deed notice and capping of the contaminated areas [asbestos for area C and polychlorinated biphenyls (PCBs) for area D]. Based on drawings available in NJDEP files, it appears that areas C and D are located on portions of the former GAF site that do not include the subject property. Numerous additional AOCs were investigated/remediated during ISRA activities on the GAF property. However, none of the AOCs that were investigated/remediated during ISRA activities appear to be located on the subject property.
- Based on a recent limited site investigation conducted by the Butler Group on the pier, three soil samples were collected. Soil sample GP-1 did not contain any compounds at concentrations exceeding the most stringent SCC. Cadmium was detected in GP-2 at a concentration exceeding the most stringent SCC. Arsenic, antimony, and total petroleum hydrocarbons (TPH) were detected in GP-3 at concentrations exceeding the most stringent SCC, while beryllium was detected at a concentration equal to the most stringent SCC.

NJDEP's Geographic Information System

A review of data residing in New Jersey's Environmental Management System (NJEMS) was conducted to determine if the site was included on various environmental databases including Groundwater Contamination Areas, Classification Exception Areas, Known Contaminated Sites (2001), and Public Community Water Supply Wells. GAF Corporation was listed as a Known Contaminated Site with a status of NFA. An NFA

status indicates that no further action was issued prior to January 1, 1997 and covers either an entire site or a partial area of a site.

ITEM 2B Recent Operations

The subject property located at 707 Water Street is currently owned by Gloucester Point, Inc. The western end of the pier is currently vacant. Branca Metals, a metal recycling company, leases the remainder of the property from Gloucester Point, Inc.

The subject property was historically occupied by pavilions and dwellings/boat houses. Sometime between 1915 and 1923 the Pennsylvania Shipbuilding Company of the Pusey and Jones Company began occupying the subject property. During this period, a pier was also added to the western side of the subject property. By 1930 the Lang Company, manufacturers of felt base roofing paper, were occupying the subject property, and by 1945 the Ruberoid Company took over the Lang Company and continued manufacturing felt base roofing paper. In 1967 the Ruberoid Company merged with the GAF Corporation and operations continued until 1984. Gloucester Point, Inc. purchased the property from GAF Corporation in 1996. The western end of the pier is currently vacant. Branca Metals currently leases the property from Gloucester Point, Inc. Branca Metals conducts metals recycling operations.

ITEM 3 Hazardous Substance/Waste Inventory

Based on file reviews and the site inspection there area no hazardous substance/waste inventory areas identified on the subject property.

ITEM 4A Historic and Current Wastewater Discharges

According to NJDEP files, GAF Corporation relied on the public water supply. Additionally, GAF Corporation discharged non-contact cooling water to the Delaware River under NJPDES/DSW permit #NJ0005371. The final permit was issued March 19, 1985. On October 6, 1986 GAF Corporation filed an affidavit of exemption to terminate their NJPDES permit, stating that the facility was closed. During the site inspection no outfalls were identified on the subject property.

ITEM 4B Historic and Current Process Waste Streams and Disposal Points

Known historic and current waste streams for the site include only sanitary wastewater and non-contact cooling water. No other current waste streams or disposal points were identified.

ITEM 5 Potential Areas of Concern

This section identifies potential areas of environmental concern that formerly or currently exist at the site and may require further investigation.

5A – Bulk Storage Tanks and Appurtenances

The EDR report and file reviews identified GAF Corporation as having a 1,000-gallon leaded gasoline underground storage tank (UST) which was abandoned-in-place on November 15, 1988, a 10,000-gallon No. 1 kerosene UST abandoned-in-place on December 15, 1988, and a 500-gallon No. 2 home heating oil UST removed on December 15, 1988. The kerosene UST was reportedly last used in 1972, the home heating oil UST was reportedly last used in 1979, and the leaded gasoline UST was reportedly last used in 1985. The former UST locations are identified as AOC-6, AOC-7, and AOC-8, respectively; however, their locations are not depicted on Figure 3. The NJDEP files indicated that the 1,000-gallon leaded gasoline UST and the 10,000-gallon No. 1 kerosene UST were located on GAF Corporation property on the eastern side of Water

Street and not on the subject property. The location of the 500-gallon No. 2 home heating oil UST is unknown. This tank was reportedly removed in December 1988 and moved to another location on GAF property. No further investigation is recommended with regard to AOC-6 and AOC-7. As part of SI activities, the location of the No. 2 home heating oil UST will be verified, if possible through further inquiring.

No aboveground storage tanks (ASTs) were observed on the subject property during the site reconnaissance.

Railroad sidings were identified on the 1923 Sanborn Map as being located throughout the property. The rail lines entered the site from Charles Street and south of the site. The rail lines then branched out north of the property and westward down the pier. The former railroad sidings are identified as AOC-11. During the site reconnaissance no evidence of railroad sidings were noted on the subject property. Recommended SI activities associated with this AOC will be conducted in conjunction with AOC-14, AOC-41, and AOC-42.

Three loading areas were observed during the site reconnaissance as being associated with Building No. 6. The loading areas are located on the northern, western, and southern sides of Building No. 6 and are identified as AOC-14, AOC-15, and AOC-16, respectively. No drains were observed in the vicinity of the Building No. 6 loading areas.

As part of SI activities, two soil borings will be advanced in the vicinity of the loading area on the northern side of Building No. 6 (AOC-14). One soil sample will be collected from each boring and analyzed for TPHC, PP+40 and asbestos to determine if the soil adjacent to the loading area has been impacted.

There are three bays associated with the loading area on the western side of Building No. 6 (AOC-15). Three soil borings will be advanced in the vicinity of AOC-15. One soil sample will be collected from each boring and analyzed for TPHC, PP+40, and asbestos to determine if the soil adjacent to the loading area has been impacted.

The investigation of the loading area on the southern side of Building No. 6 (AOC-16) will be conducted in conjunction with AOC-42.

A loading area was also observed during the site reconnaissance at the eastern end of Building No. 2. This loading area is identified as AOC-17. One soil boring will be advanced in the vicinity of AOC-17. The soil sample collected from this boring will be analyzed for TPHC, PP+40, and asbestos to determine if the soil adjacent to the loading area has been impacted.

5B – Storage and Staging Areas

An area with empty crushed and intact drums was identified during the site reconnaissance outside of the northern portion of Building No. 6. The Building No. 6 drum storage area is identified as AOC-19. One soil boring will be advanced in this area. One soil sample will be collected from this boring and will be analyzed for TPHC, PP+40 and asbestos to determine if the soil beneath the drums has been impacted.

Empty drums were observed during the site reconnaissance at the eastern end of the pier and are associated with the Branca Metals operation. These drums were identified as being mostly empty with some residue. The pier drum storage area is identified as AOC-20. As part of SI activities, four soil borings will be advanced, and one soil sample will be collected from each boring to be analyzed for TPHC, PP+40, and asbestos to determine if the soil on the eastern end of the pier has been impacted.

During the site reconnaissance, approximately 16 drums of motor oil were observed to be stored on pallets in Building No. 4. The Building No. 4 drum storage area is identified as AOC-23. No evidence of releases or staining adjacent to this area was noted during the site reconnaissance. No further investigation is recommended with regard to AOC-23.

There were approximately twelve dumpsters present on the eastern end of the pier and adjacent to the northern loading area for Building No. 6 at the time of the site reconnaissance. They appeared to be used as part of operations conducted by Branca Metals. The dumpsters are identified as AOC-24. Two soil borings will be advanced in the vicinity of the dumpsters, and two soil samples will be collected and analyzed for TPHC, PP+40, and asbestos to determine if the soil in the vicinity of the dumpsters has been impacted.

5C – Drainage Systems

A potential trench drain was observed on the southern side of Building No. 8. The drain was covered at the time of the inspection and could not be investigated further. This potential drain is identified as AOC-27. Recommended SI activities include removing the contents, inspecting the integrity and determining the discharge location for AOC-27.

Floor drains/pits were observed in Building No. 4 and in the southern end of Building No. 2 (the former machine shop). These drains are identified as AOC-29. Recommended SI activities include removing the contents, inspecting the integrity and determining the discharge location for AOC-29.

Pits were identified in the southern loading area of Building No. 6 during the site reconnaissance. These pits are identified as AOC-43. Recommended SI activities include removing the contents, inspecting the integrity and determining the discharge location for AOC-43.

5D – Discharge and Disposal Areas

The database search through EDR indicated that the site has not had any release/spill cases reported to the NJDEP. However, the FOIA request through the NJDEP indicated that the site has had a release/spill case reported to the NJDEP. On August 1, 1991 a spill of solid polyvinyl chloride on GAF property was reported to NJDEP. The communications notification report indicated that 40-gallon drums were abandoned on the property and then vandalized causing the spill. Case number 91-8-1-1309-13 was assigned to the incident. GAF received a NFA from the NJDEP in 1995. None of the AOCs investigated by GAF appear to have been located on the subject property.

Several waste piles consisting of soil, crushed concrete, construction debris, and debris from metals recycling operations were identified on the western portion of Lot 3 (AOC-37). Three soil samples will be collected from these piles and analyzed for TPHC, PP+40, and asbestos.

Several piles of crushed concrete and soil were observed on the pier. Debris including slag, bricks, concrete blocks, and compost waste was also observed along the shoreline of the pier. Old auto parts were observed on the eastern end of the pier. The waste piles associated with the pier are identified as AOC-38. A total of two soil samples will be collected from these piles and will be analyzed for TPHC, PP+40, and asbestos.

Based on the site reconnaissance, it was noted that all or portions of the pier contain imported fill material including material containing slag. Historic fill material, as defined at N.J.A.C. 7:26E-1.8, is non-indigenous material, deposited to raise the topographic elevation of the site, which was contaminated prior to

emplacement and is in no way connected to operations at the location of emplacement. Previous sampling activities conducted on the pier identified contamination of arsenic in excess of the SCC. Historic fill material on the pier is identified as AOC-41. As part of SI activities, six soil borings will be advanced across the pier. One soil sample will be collected from each boring and analyzed for TPHC, PP+40, asbestos, antimony, and arsenic.

5E – Other Areas of Concern

A former transformer area is located south of Building No. 2 and east of Building No. 4 and is identified as AOC-33. Four soil samples will be collected from this AOC and will be analyzed for PCBs and asbestos.

Transformer ballasts were identified on the wall in Building No. 4 and are identified as AOC-35. No evidence of a release was noted with regard to these ballasts. No further investigation is recommended with regard to AOC-35.

A former transformer area was identified during the file review as being located southwest of Building No. 2 and Building No. 4 and is identified as AOC-48. This former transformer area was not observed during the site reconnaissance. Four soil samples will be collected from this AOC and will be analyzed for PCBs and asbestos.

Stained floors were observed in Building No. 6 and Building No. 8, where metals recycling operations are conducted. The staining in these two buildings is identified as AOC-39. Since no cracks or seams were identified in these floors, no further investigation is recommended with regard to AOC-39.

The exterior portion of the metals recycling facility (Branca Metals), which is conducted in an unpaved area, is identified as AOC-42. Six soil borings across the unpaved area are recommended. One soil sample will be collected from each boring and analyzed for TPHC, PP+40, and asbestos to determine if the soil has been impacted.

A pipeline was identified in the file review as running along the pier and the northern boundary of the GAF property. The pipeline was identified as being connected to a 400,000-gallon No.6 oil aboveground storage tank that is located on the eastern side of Water Street, and not on the subject property. The pipeline is identified as AOC-45. This AOC will be investigated in conjunction with AOC-41.

5F – Building Interior Areas

One compressor was identified in Building No. 8 during the site reconnaissance. The compressor vent discharges to the eastern side of Building No. 8 and is identified as AOC-44. One soil sample will be collected in the vicinity of the discharge location and will be analyzed for TPHC, polyaromatic hydrocarbons (PAHs), and asbestos.

The file review indicated that the former machine shop locating in Building No. 2 had brick floor areas. The former machine shop is identified as AOC-46. One soil boring will be advanced in the former machine shop and one soil sample will be collected and analyzed for TPHC, VOCs, and PAHs.

ITEM 6 Aerial Photograph Review

An inquiry was made through EDR to obtain historic aerial photographs for the site area. Photographs were available for the following years: 1940, 1954, 1963, 1970, 1981, and 1995. These photographs were utilized to

ATTACHMENT E

SECTION IV – DESCRIPTION OF WATER SYSTEM

Bellmawr Water Department
PWID # 0404001

PO Box 368
Bellmawr, NJ 08099-0368
(856)931-7269

Bellmawr Water Department is a public community water system consisting of

2 Entry Points to the Distribution System (EPTDS)
- 4 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 1 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Bellmawr Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Bellmawr Boro	Camden	9522

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Bellmawr Water Department

Table 7 provides the Bellmawr Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	004	BELL AND LEAF PLANT	T	P				
01	005	WELL 4/BELL AND LEAF	G	P	lower Potomac-Raritan-Magothy aquifer	0.5581	31-04969	C
01	006	WELL 5/HALL AND WALNUT	G	P	lower Potomac-Raritan-Magothy aquifer	0.5956	31-12315	C
02	009	WARREN AVE PLANT	T	P				
02	010	WELL 3 - PRINCETON/CARTER	G	P	upper Potomac-Raritan-Magothy aquifer	0.1674	31-02687	C
02	011	WELL 6 WARREN AVE	G	P	lower Potomac-Raritan-Magothy aquifer	0.4577	31-19218	C
03	013	BROOKLAWN WATER DEPT	W	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Bellmawr Water Department contains 2 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Brooklawn Water Department
PWID # 0407001

301 Christiana Street
Brooklawn, NJ 08030
(856)456-7785

Brooklawn Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)
- 3 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 1 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Brooklawn Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Brooklawn Boro	Camden	2800

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Brooklawn Water Department

Table 7 provides the Brooklawn Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	002	BROOKLAWN TP	T	P				
01	003	WELL 1 BROADWAY RR SIDE	G	P	lower Potomac-Raritan-Magothy aquifer	0.2822	31-04325	U
01	004	WELL 3 BEHIND PLANT	G	P	lower Potomac-Raritan-Magothy aquifer	0.2016	31-14471	U
01	005	WELL 4 TIMBER BLVD	G	P	lower Potomac-Raritan-Magothy aquifer	0.3571	31-19765	U
03	008	BELLMAWR WATER DEPT	W	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Brooklawn Water Department contains 1 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Camden City Water Department O&M by US Water
PWID # 0408001

PO Box 190
Camden City, NJ 08101
(800)334-9781

Camden City Water Department O&M by US Water is a public community water system consisting of

3 Entry Points to the Distribution System (EPTDS)
- 30 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 4 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Camden City Water Department O&M by US Water.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Camden City	Camden	50000

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Camden City Water Department O&M by US Water

Table 7 provides the Camden City Water Department O&M by US Water's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	002	MORRIS DELAIR WTP/CHLORINATION	T	P				
01	003	DELAIR WELL 1	G	P	lower Potomac-Raritan-Magothy aquifer	1.9266	51-00053	U
01	004	DELAIR WELL 2	G	P	lower Potomac-Raritan-Magothy aquifer	1.3377	51-00054	U
01	005	DELAIR WELL 3	G	P	lower Potomac-Raritan-Magothy aquifer	1.0641	51-00055	U
01	006	MORRIS N WELL 1	G	U	lower Potomac-Raritan-Magothy aquifer	2.3038	51-00050	U
01	007	MORRIS N WELL 2	G	U	lower Potomac-Raritan-Magothy aquifer	2.1599	51-51984	U
01	008	MORRIS N WELL 3	G	P	lower Potomac-Raritan-Magothy aquifer	1.0367	31-00945	U
01	009	MORRIS N WELL 4	G	P	lower Potomac-Raritan-Magothy aquifer	1.1116	31-04252	U
01	010	MORRIS S WELL 10	G	P	lower Potomac-Raritan-Magothy aquifer	1.5234	31-04251	U
01	011	MORRIS S WELL 11	G	W	lower Potomac-Raritan-Magothy aquifer	1.7351	31-15745	U
01	012	MORRIS S WELL 12	G	P	lower Potomac-Raritan-Magothy aquifer	2.1512	31-16814	U
01	013	MORRIS S WELL 13	G	P	lower Potomac-Raritan-Magothy aquifer	2.1426	31-16813	U
01	014	MORRIS S WELL 6	G	P	lower Potomac-Raritan-Magothy aquifer	2.4478	51-00051	U
01	015	MORRIS S WELL 7	G	P	lower Potomac-Raritan-Magothy aquifer	1.8056	51-00052	U
01	016	MORRIS S WELL 8	G	P	lower Potomac-Raritan-Magothy aquifer	0.9619	31-00944	U
01	017	MORRIS S WELL 9	G	W	lower Potomac-Raritan-Magothy aquifer	1.1274	51-00076	U

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	062	MORRIS SOUTH WELL #14	G	P		2.9664		T
01	063	MORRIS SOUTH WELL #15	G	P		2.9664		T
02	019	PUCHACH RUN WTP/POST CHLORINAT	T	W				
02	020	PUCHACK WELL 1	G	P	lower Potomac-Raritan-Magothy aquifer	2.1599	51-00056	U
02	021	PUCHACK WELL 2	G	E	lower Potomac-Raritan-Magothy aquifer	1.4399	51-00057	U
02	022	PUCHACK WELL 3	G	W	lower Potomac-Raritan-Magothy aquifer	1.8431	51-00058	U
02	023	PUCHACK WELL 5	G	W	lower Potomac-Raritan-Magothy aquifer	1.9066	51-00059	U
02	024	PUCHACK WELL 6	G	W	lower Potomac-Raritan-Magothy aquifer	1.7999	31-05450	U
02	025	PUCHACK WELL 7	G	U	lower Potomac-Raritan-Magothy aquifer	1.7999		U
03	026	PARKSIDE WTP	T	P				
03	027	PARKSIDE WELL 13	G	Y	lower Potomac-Raritan-Magothy aquifer	0.6912	31-00904	S
03	028	PARKSIDE WELL 17	G	P	lower Potomac-Raritan-Magothy aquifer	0.9878	31-01250	U
03	029	PARKSIDE WELL 18	G	P	lower Potomac-Raritan-Magothy aquifer	1.7279	31-09574	U
03	030	CITY WELL 1	G	W	lower Potomac-Raritan-Magothy aquifer	1.44	99-00085	U
03	031	CITY WELL 3	G	W	lower Potomac-Raritan-Magothy aquifer	1.44	31-00942	U
03	034	CITY WELL 6	G	W	lower Potomac-Raritan-Magothy aquifer	1.4399	31-00013	U
03	042	CITY WELL 16	G	W	lower Potomac-Raritan-Magothy aquifer	1.44	31-01249	U
18	047	GLOUCESTER CITY WD	W	E				
19	051	NJW CO HADDON/CAMDEN	W	E				
20	054	MERCHANTVILLE PENNSAUKEN	W	E				
21	058	COLLINGSWOOD	W	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Camden City Water Department O&M by US Water contains 3 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Collingswood Water Department
PWID # 0412001

678 Haddon Avenue
Collingswood, NJ 08108
(856)854-2332

Collingswood Water Department is a public community water system consisting of

2 Entry Points to the Distribution System (EPTDS)
- 7 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 3 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Collingswood Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Collingswood Boro	Camden	20,000
Haddon Twp.	Camden	600
Woodlynne Boro	Camden	990

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Collingswood Water Department

Table 7 provides the Collingswood Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	002	PLANT 1/HIGHLAND & HILLCREST (	T	P				
01	003	WELL 1/HILLCREST & MAPLE	G	P	lower Potomac-Raritan-Magothy aquifer	1.4399	31-00079	U
01	004	WELL 2/HIGHLAND & HILLCREST	G	P	lower Potomac-Raritan-Magothy aquifer	1.0079	31-04053	S
01	005	WELL 3/HIGHLAND & HILLCREST	G	P	lower Potomac-Raritan-Magothy aquifer	1.1519	31-04054	S
01	006	WELL 4/N.VINEYARD & HIGHLAND	G	P	lower Potomac-Raritan-Magothy aquifer	0.9763	51-00030	U
01	007	WELL 5/S. PARK DR. & RIVER	G	P	lower Potomac-Raritan-Magothy aquifer	1.1606	51-00031	U
02	008	PLANT 2/CONLEY & NEWTON (WEST	T	P				
02	009	WELL 6/CATTEL AVE.	G	P	lower Potomac-Raritan-Magothy aquifer	0.576	31-04799	S
02	010	WELL 7/COMBY AVE.	G	P	lower Potomac-Raritan-Magothy aquifer	0.7545	31-04797	S
05	015	CAMDEN CITY WATER DEPT	W	E				
06	017	HADDON TWP. WATER DEPARTMENT	W	E				
07	019	HADDON TWP. WD (LINCOLN AND BURNWOOD RDS)	W	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Collingswood Water Department contains 2 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Deptford Township MUA
PWID # 0802001

1704-1706 Hurffville Road (PO Box 5506)
Deptford, NJ 08096
(856)374-8080

Deptford Township MUA is a public community water system consisting of

7 Entry Points to the Distribution System (EPTDS)
- 8 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 3 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Deptford Township MUA.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Deptford Twp.	Gloucester	25000

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Deptford Township MUA

Table 7 provides the Deptford Township MUA's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	001	PRINCETON AVE	T	P				
01	002	WELL 1 PRINCETON	G	P	upper Potomac-Raritan-Magothy aquifer	0.3761	31-02416	C
02	003	PRINCETON AVE	T	P				
02	004	WELL 2 PRINCETON	G	P	upper Potomac-Raritan-Magothy aquifer	1.224	31-03462	C
03	007	THIRD AVE	T	P				
03	034	WELL 4 THIRD AVENUE	G	Y	middle Potomac-Raritan-Magothy aquifer	0.5376	31-05513	C
04	009	WELL 9, COUNTY HOUSE RD @ INDI	T	P				
04	010	WELL 5 COUNTY HOUSE ROAD	G	Y	upper Potomac-Raritan-Magothy aquifer	0	31-50939	C
04	041	WELL 9, COUNTY HOUSE RD @ INDI	G	P	middle Potomac-Raritan-Magothy aquifer	1.008		C
05	012	DELSEA DRIVE	T	P				
05	013	WELL 6 DELSEA DRIVE	G	P	middle Potomac-Raritan-Magothy aquifer	0.7694	31-13385	C
06	015	BANKBRIDGE AVE	T	P				
06	016	WELL 7 BANKBRIDGE BLVD.	G	P	upper Potomac-Raritan-Magothy aquifer	0.8137	31-22504	C
07	018	WESTVILLE W D	W	E				
08	027	WOODBURY W D	W	E				
09	030	WOODBURY HEIGHTS	W	E				
13	035	WELL #8	G	P	upper Potomac-Raritan-Magothy aquifer	1.0808	31-37705	C
13	038	WELL #8 TREATMENT PLANT	T	P				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Deptford Township MUA contains 7 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Gloucester City Water Department
PWID # 0414001

100 N Johnson Boulevard
Gloucester, NJ 08030
(856)456-0169

Gloucester City Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)
- 4 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 2 purchased ground water
- 1 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Gloucester City Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Gloucester City	Camden	12200

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Gloucester City Water Department

Table 7 provides the Gloucester City Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	004	PLANT/NICHOLSON & JOHNSON, LOT	T	P				
01	005	WELL 40/JOHNSON (AT PLANT)	G	P	lower Potomac-Raritan-Magothy aquifer	0.7804	31-04306	U
01	006	WELL 41/JOHNSON BLVD.	G	P	lower Potomac-Raritan-Magothy aquifer	0.7099	31-27737	U
01	007	WELL 42/NICHOLSON	G	P	lower Potomac-Raritan-Magothy aquifer	0.576	31-05242	U
01	008	WELL 43/JOHNSON (AT PLANT)	G	P	lower Potomac-Raritan-Magothy aquifer	1.4399	31-18822	U
03	011	MT. EPHRAIM W D	W	E				
04	013	CAMDEN CITY W D	W	E				
05	016	NJ AMERICAN W. CO.	P	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Gloucester City Water Department contains 1 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Haddon Township Water Department
PWID # 0416001

504 Oneida Avenue
Westmont, NJ 08108
(856)854-1825

Haddon Township Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)
4 5 wells
0 wells under the influence of surface water
0 surface water intake(s)
0 purchased ground water
1 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Haddon Township Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Collingswood Boro	Camden	
Haddon Twp.	Camden	11,000
Haddonfield Boro	Camden	

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Haddon Township Water Department

Table 7 provides the Haddon Township Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	003	TREATMENT	T	P				
01	004	WELL 1A/MAC ARTHUR BLVD	G	P	lower Potomac-Raritan-Magothy aquifer	0.9409	31-05243	C
01	005	WELL 2A/BEECHWOOD AVE	G	P	lower Potomac-Raritan-Magothy aquifer	0.7101	31-29099	C
01	006	WELL 3A/BEECHWOOD AVE	G	P	lower Potomac-Raritan-Magothy aquifer	0.5235	31-28896	C
01	007	WELL 4/MAC ARTHUR BLVD	G	P	lower Potomac-Raritan-Magothy aquifer	0.463	31-04855	C
01	012	WELL #5 MAE ARTHUR BLVD. A	G	P	upper Potomac-Raritan-Magothy aquifer	1.44	31-59128	C
07	010	NJ AMERICAN W CO./DELAWARE VALLEY	P	P				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Haddon Township Water Department contains 1 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

National Park Water Department
PWID # 0812001

7 South Grove Road
National Park, NJ 08063
(856)854-3891

National Park Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)
- 2 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 1 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by National Park Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
National Park Boro	Gloucester	3250

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: National Park Water Department

Table 7 provides the National Park Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	002	GROVE AND LAKEHURST	T	P				
01	003	WELL 5	G	P	lower Potomac-Raritan-Magothy aquifer	0.3456	31-02555	U
01	004	WELL 6	G	P	lower Potomac-Raritan-Magothy aquifer	0.4032	31-17938	U
02	006	WEST DEPTFORD	W	E				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The National Park Water Department contains 1 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

NJ American Water Company - Western Division
PWID # 0327001

515 Grove Street
Haddon Heights, NJ 08035
(800)652-6987

NJ American Water Company - Western Division is a public community water system consisting of

27 Entry Points to the Distribution System (EPTDS)
- 71 wells
- 0 wells under the influence of surface water
- 1 surface water intake(s)
- 11 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by NJ American Water Company - Western Division.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Beverly City	Burlington	2875
Burlington Twp.	Burlington	378
Cinnaminson Twp.	Burlington	17396
Delanco Twp.	Burlington	3523
Delran Twp.	Burlington	14741
Edgewater Park Twp.	Burlington	5305
Maple Shade Twp.	Burlington	103
Moorestown Twp.	Burlington	5
Mount Laurel Twp.	Burlington	1622
Palmyra Boro	Burlington	6055
Riverside Twp.	Burlington	7110
Riverton Boro	Burlington	2454
Audubon Boro	Camden	8141
Audubon Park Boro	Camden	14
Barrington Boro	Camden	5365
Bellmawr Boro	Camden	3182
Camden City	Camden	21502
Cherry Hill Twp.	Camden	58562
Clementon Boro	Camden	7
Gibbsboro Boro	Camden	2672
Gloucester Twp.	Camden	16684
Haddon Heights Boro	Camden	6964
Haddon Twp.	Camden	1134
Haddonfield Boro	Camden	59
Hi-Nella Boro	Camden	384
Laurel Springs Boro	Camden	1947
Lawnside Boro	Camden	2559

Municipality	County	Population Served - 2003
Lindenwold Boro	Camden	7993
Magnolia Boro	Camden	4335
Mount Ephraim Boro	Camden	3
Oaklyn Boro	Camden	3640
Pennsauken Twp.	Camden	2784
Runnemede Boro	Camden	7358
Somerdale Boro	Camden	4752
Stratford Boro	Camden	6119
Voorhees Twp.	Camden	20826

248,553

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: NJ American Water Company - Western Division

Table 7 provides the NJ American Water Company - Western Division's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	002	BEVERLY STATION/BROAD FRONT ST	T	P				
01	003	WELL 15/BROAD STREET	G	P	middle Potomac-Raritan-Magothy aquifer	0.576	27-00356	U
01	004	WELL 16/BROAD STREET	G	V	middle Potomac-Raritan-Magothy aquifer	0.4608	27-01528	U
01	005	18 COOPER ST., WELL #32	G	P	middle Potomac-Raritan-Magothy aquifer	1.2221	27-05315	U
01	190	IVY ROAD, WELL #22 (FORMERLY F	G	P	middle Potomac-Raritan-Magothy aquifer	0.7171	27-04050	U
02	048	DELAWARE RIVER/TRI-COUNTY INTA	S	P	Delaware River	40	njamerde	
02	049	TRI-COUNTY TREATMENT PLANT	T	P				
03	008	WELL 14/NEW ALBANY ROAD	G	P	middle Potomac-Raritan-Magothy aquifer	1.44	31-04697	U
03	009	WELL 26/NEW ALBANY ROAD	G	P	Potomac-Raritan-Magothy aquifer system	0.7646	31-04733	U
03	010	POMONA ROAD STATION	T	P				
03	011	WELL 10/POMONA ROAD	G	P	lower Potomac-Raritan-Magothy aquifer	0.5558	31-03835	U
03	012	WELL 12/POMONA ROAD	G	P	middle Potomac-Raritan-Magothy aquifer	0.4032	31-04276	U
04	014	STEVENS DRIVE STATION	T	P				
04	015	WELL 28/STEVENS DRIVE	G	P	lower Potomac-Raritan-Magothy aquifer	0.9369	31-05321	U
04	016	WELL 31/STEVENS DRIVE	G	P	lower Potomac-Raritan-Magothy aquifer	1.4932	31-05437	U
05	018	CHESTER AVENUE STATION	T	U				
05	019	WELL 23/CHESTER AVENUE	G	U	lower Potomac-Raritan-Magothy aquifer	1.44	27-04247	U

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
05	020	WELL 24/CHESTER AVENUE	G	U	middle Potomac-Raritan-Magothy aquifer	1.1809	27-04680	U
06	021	FAIRVIEW STREET STATION	T	W				
06	022	WELL 30/FAIRVIEW STREET	G	E	middle Potomac-Raritan-Magothy aquifer	0.9577	27-05202	U
07	023	LEON AVENUE STATION	T	W				
07	024	WELL 19/LEON AVENUE	G	W	lower Potomac-Raritan-Magothy aquifer	0.7949	27-03080	U
09	026	IVY ROAD STATION	T	W				
10	031	HIGHLAND AVENUE STATION	T	P				
10	032	WELL 13/HIGHLAND AVE.	G	P	lower Potomac-Raritan-Magothy aquifer	0.6451	31-04576	U
10	033	WELL 27/HIGHLAND AVE.	G	P	lower Potomac-Raritan-Magothy aquifer	1.2074	31-04864	U
16	044	MOORESTOWN W D	W	E				
17	046	MAPLE SHADE WD	W	P				
18	050	ASHLAND TERRACE STATION	T	U				
18	051	WELL 17/ATLANTIC AVE.ON	G	P	upper Potomac-Raritan-Magothy aquifer	0.6557	31-03306	C
18	052	WELL 32	G	P	upper Potomac-Raritan-Magothy aquifer	0.6656	31-04947	C
19	054	BROWNING LANE STATION	T	P				
19	055	WELL 44/BROWNING LA	G	P	lower Potomac-Raritan-Magothy aquifer	2.016	31-07021	C
19	056	WELL 45	G	P	lower Potomac-Raritan-Magothy aquifer	1.268	31-07020	C
19	057	WELL 46	G	P	lower Potomac-Raritan-Magothy aquifer	2.016	31-07019	C
19	058	WELL 65	G	P	lower Potomac-Raritan-Magothy aquifer	0.2627	31-38319	C
20	060	COLUMBIA LAKE TREATMENT	T	U				
20	061	WELL 22	G	P	lower Potomac-Raritan-Magothy aquifer	0.1495	31-04051	C
20	062	WELL 24	G	P	upper Potomac-Raritan-Magothy aquifer	1.296	31-04274	C
20	063	WELL 31	G	P	lower Potomac-Raritan-Magothy aquifer	0.1429	31-05033	C
21	064	EGBERT STATION	T	U				
21	065	WELL 18	G	R	upper Potomac-Raritan-Magothy aquifer	0.0396	31-03308	C

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
21	066	WELL 35	G	R	lower Potomac-Raritan-Magothy aquifer	0.0443	31-05054	C
22	068	ELLISBURG STATION	T	W				
22	069	WELL 13	G	W	lower Potomac-Raritan-Magothy aquifer	0.3263	31-00684	C
22	070	WELL 16	G	W	upper Potomac-Raritan-Magothy aquifer	0.0073	31-03305	C
22	071	WELL 23	G	W	lower Potomac-Raritan-Magothy aquifer	0.3869	31-04098	C
23	072	ELM TREE STATION	T	U				
23	073	WELL 26	G	P	Mount Laurel-Wenonah aquifer	0.3984	51-00010	C
24	076	GIBBSBORO STATION	T	P				
24	077	GIBBSBORO STAITON WELL 56	G	P	Englishtown aquifer system	0.4264	31-29320	C
24	078	GIBBSBORO STAITON WELL 57	G	P	Englishtown aquifer system	0.432	31-29319	C
24	079	WELL 41	G	P	lower Potomac-Raritan-Magothy aquifer	1.35	31-05949	C
24	080	WELL 42	G	P	lower Potomac-Raritan-Magothy aquifer	2.016	31-05950	C
24	081	WELL 43	G	P	lower Potomac-Raritan-Magothy aquifer	2.016	31-05951	C
25	083	HADDON HEIGHTS STATION	T	P				
25	084	WELL 14	G	P	lower Potomac-Raritan-Magothy aquifer	1.152	31-01124	C
25	085	WELL 15	G	P	lower Potomac-Raritan-Magothy aquifer	1.296	31-02434	C
25	086	WELL 20	G	P	upper Potomac-Raritan-Magothy aquifer	0.7901	31-03375	C
25	087	WELL 30	G	P	upper Potomac-Raritan-Magothy aquifer	0.5625	31-04798	C
25	088	WELL NO. 63 - TRENTON AVENUE	G	P	lower Potomac-Raritan-Magothy aquifer	1.44	31-40970	C
26	090	KINGSTON STATION	T	R				
26	091	WELL 25	G	P	lower Potomac-Raritan-Magothy aquifer	0.294	51-00007	C
26	092	WELL 59	G	P	lower Potomac-Raritan-Magothy aquifer	0.4422	31-31111	C
26	093	WELL 62	G	P	upper Potomac-Raritan-Magothy aquifer	0.2893	31-31110	C
27	096	LAUREL SPRINGS STATION	T	S				
27	097	LAUREL SPRINGS WELL 60	G	P	Englishtown aquifer system	0.36	31-29318	C

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
27	098	LAUREL SPRINGS WELL 61	G	P	Englishtown aquifer system	0.36	31-29317	C
27	099	WELL 1	G	P	Mount Laurel-Wenonah aquifer	0.1508	51-00011	C
27	100	WELL 10	G	P	Mount Laurel-Wenonah aquifer	0.1031	51-00014	C
27	101	WELL 13	G	P	lower Potomac-Raritan-Magothy aquifer	0.3408	31-01363	C
27	102	WELL 15	G	P	upper Potomac-Raritan-Magothy aquifer	0.8102	31-04723	C
27	103	WELL 4	G	P	Mount Laurel-Wenonah aquifer	0.1627	51-00012	C
27	104	WELL 8	G	P	Mount Laurel-Wenonah aquifer	0.0862	51-00013	C
28	106	MAGNOLIA STATION	T	P				
28	107	WELL 64	G	P	lower Potomac-Raritan-Magothy aquifer	0.9543	31-40817	C
28	108	WELL 33	G	P	upper Potomac-Raritan-Magothy aquifer	0.8347	31-05100	C
29	111	OLD ORCHARD STATION	T	P				
29	112	WELL 36	G	P	upper Potomac-Raritan-Magothy aquifer	1.2781	31-05217	C
29	113	WELL 37	G	P	lower Potomac-Raritan-Magothy aquifer	1.7324	31-05219	C
29	114	WELL 38	G	P	lower Potomac-Raritan-Magothy aquifer	1.9768	31-05218	C
29	115	WELL 58	G	P	lower Potomac-Raritan-Magothy aquifer	1.152	31-30468	C
30	116	WELL 29	G	P	lower Potomac-Raritan-Magothy aquifer	1.1798	31-04756	C
30	119	OTTERBROOK STATION	T	P				
30	120	WELL 34	G	P	upper Potomac-Raritan-Magothy aquifer	1.512	31-05041	C
30	121	WELL 39	G	P	upper Potomac-Raritan-Magothy aquifer	1.7453	31-05226	C
31	122	RUNNEMEDE STATION	T	S				
31	123	WELL 19	G	P	upper Potomac-Raritan-Magothy aquifer	0.6361	31-03307	C
32	125	WELL 14	G	P	upper Potomac-Raritan-Magothy aquifer	0.5654	31-02360	C
32	127	SOMERDALE STATION	T	S				
33	130	VOORHEES STATION	T	P				
33	131	WELL 21	G	P	upper Potomac-Raritan-Magothy aquifer	1.44	31-03872	C

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
34	170	MURRAY AVE AQUIFER STORAGE & R	G	S	Potomac-Raritan-Magothy aquifer system	0.3093	31-40911	C
34	171	MURRAY AVE AQUIFER STORAGE & R	T	P				
41	152	BERLIN W D	W	E				
42	155	CLEMENTON W D	W	E				
43	157	GARDEN STATE W C/BLACKWOOD	W	E				
44	160	HADDONFIELD W D	W	E				
45	163	MERCHANTVILLE/PENNSAUKEN W C	W	E				
46	165	MT EPHRAIM W D	W	E				
47	168	MT LAUREL MUA	W	P				
54	173	WELL #50/HAYES & REEVES	G	E	lower Potomac-Raritan-Magothy aquifer	0.4032	31-03456	U
54	175	WELL 51-31ST & CLEVELAND	G	E	lower Potomac-Raritan-Magothy aquifer	0.7487	31-04780	U
54	176	WELL 52-29TH & CLEVELAND	G	E	lower Potomac-Raritan-Magothy aquifer	1.1145	31-04847	U
54	177	WELL 53/32ND & CLEVELAND	G	E	lower Potomac-Raritan-Magothy aquifer	1.0799	31-18947	U
54	178	WELL 54-34TH & CLEVELAND	G	E	lower Potomac-Raritan-Magothy aquifer	1.0569	31-18944	U
54	179	WELL 55/CLEVELAND & HAYES	G	E	lower Potomac-Raritan-Magothy aquifer	0.6048	31-20270	U
54	188	CAMDEN TREATMENT PLANT	T	U				
55	187	MERCHANTVILLE-PENNSAUKEN	W	E				
57	192	EAST GREENWICH TWP. WD	W	P				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The NJ American Water Company - Western Division contains 27 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

West Deptford Township Water Department
PWID # 0820001

PO Box 89
Thorofare, NJ 08086
(856)845-4004

West Deptford Township Water Department is a public community water system consisting of

6 Entry Points to the Distribution System (EPTDS)
- 6 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 3 purchased ground water
- 1 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by West Deptford Township Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
West Deptford Twp.	Gloucester	19000

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: West Deptford Township Water Department

Table 7 provides the West Deptford Township Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	001	JESSUP RD TREATMENT	T	P				
01	002	JESSUP RD WELL 3	G	P	upper Potomac-Raritan-Magothy aquifer	0.72	31-03021	C
02	004	PARKVILLE RD TREATMENT	T	P				
02	005	PARKVILLE RD WELL 4	G	P	upper Potomac-Raritan-Magothy aquifer	0.6336	31-04567	C
03	007	KINGS HIGHWAY TREATMENT	T	P				
03	008	KINGS HIGHWAY WELL 5	G	P	lower Potomac-Raritan-Magothy aquifer	0.5411	31-07056	C
04	011	REDBANK OAKLAND TREATMENT	T	P				
04	012	RED BANK OAKLAND WELL 6	G	P	lower Potomac-Raritan-Magothy aquifer	0.7397	51-00063	U
05	014	ACADEMY AVE TREATMENT	T	P				
05	015	ACADEMY AVE WELL 7	G	P	lower Potomac-Raritan-Magothy aquifer	1.2293	31-17452	C
06	017	PARKVILLE RD TREATMENT	T	P				
06	018	PARKVILLE RD WELL 8	G	P	middle Potomac-Raritan-Magothy aquifer	1.44	31-17811	C
08	024	WOODBURY CITY WATER DEPT.	W	E				
09	026	WOODBURY HEIGHTS WATER UTILITY	W	E				
10	028	NATIONAL PARK WATER DEPT.	W	E				
11	031	NJ AMERICAN WC/WESTERN SYSTEM	P	P				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The West Deptford Township Water Department contains 6 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

SECTION IV – DESCRIPTION OF WATER SYSTEM

Westville Water Department
PWID # 0821001

114 Crown Point Road
Westville, NJ 08093
(856)456-7785

Westville Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)
- 3 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 2 purchased ground water
- 1 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Westville Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Westville Boro	Gloucester	6000

SECTION V - INVENTORY OF TREATMENT PLANTS AND DRINKING WATER SOURCES

SECTION V - SYSTEM INVENTORY FOR: Westville Water Department

Table 7 provides the Westville Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	003	BORO HALL TP	T	P				
01	004	WELL 4/BORO HALL	G	P	lower Potomac-Raritan-Magothy aquifer	0.432	31-03418	U
01	005	WELL 5/CROWN POINT RD. BORO PA	G	P	lower Potomac-Raritan-Magothy aquifer	0.8222	31-05689	U
01	006	WELL 6/RIVER RD	G	P	lower Potomac-Raritan-Magothy aquifer	0.6912	31-17923	U
02	011	DEPTFORD WD	W	E				
03	013	WOODBURY	W	E				
04	014	NJ AMERICAN HADDON	P	P				

*KEY

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I= Interim, O = Other, P= Permanent, R= Reserve, S= Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Westville Water Department contains 1 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.